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NOTES ON THE FALL MIGRATION OF WARBLERS AND VIREOS IN EDMONTON

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Introduction

About a month before the first frosts turn the greens of summer to autumn golds, the first warblers and vireos begin their southward migration through Edmonton. In the spring they are in such a hurry to get to their breeding grounds that few stop for long in the city. But in the fall a large number and wide variety of warblers and vireos move leisurely through Edmonton; it is as if they now want to take their time. This provides local bird enthusiasts with a good opportunity for observing warblers; but with it comes a challenge, for warblers in fall plumage are much harder to identify than their spring counterparts. Both the opportunity and challenge aroused our interest in studying the fall migration of warblers and vireos in Edmonton. Although our observations were not gathered in a systematic manner, we feel that some of these observations will be of interest to other naturalists.

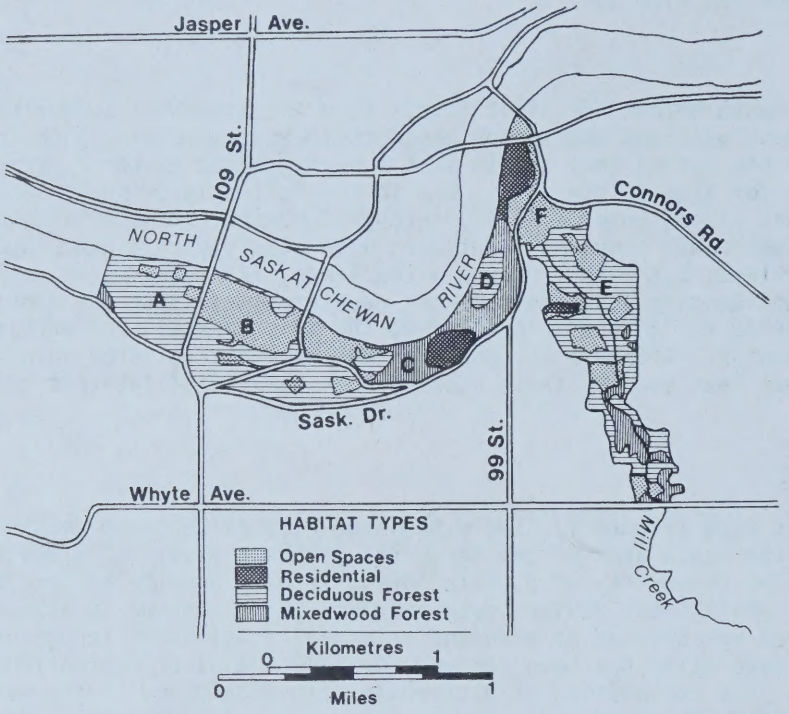
The Study Area

The study area (Figure 1) lies within the city of Edmonton and is located primarily on the south bank of the North Saskatchewan River. The western boundary is formed by the University of Alberta Forest Reserve and the eastern boundary by Connors Road. Mill Creek Ravine south to Whyte (82nd) Avenue is also included. The entire area was covered by woodland originally, but where topography permitted, much of this vegetation has been removed for residential or recreational developments. The communities of Walterdale, Cloverdale and Levine were established along the river and a few houses were built along Mill Creek. Walterdale has made way for the Kinsmen Fieldhouse and associated facilities and much of Cloverdale has been devoured by roadways and interchanges; Levine however has essentially remained unchanged. The woodland tracts are generally dominated by deciduous tree species: Balsam Poplar (*Populus balsamifera*), Aspen Poplar (*P. tremuloides*) or White Birch (*Betula papyrifera*). However in Skunk Hollow, near the University Forest Reserve and along portions of Mill Creek, White Spruce (*Picea glauca*) is common.

Methods

Assmann or Smith visited the study area on 52 of the 75 days between 1 August and 14 October, 1979. In addition Smith made 58 visits in the falls of 1974 to 1978 inclusive. Each visit lasted from one to three hours and may have occurred at any time during the daylight hours. Although an attempt was made to count all individuals and identify all species, we fully recognize the difficulty in identifying certain species of fall warblers. For example, it may be difficult to distinguish some Tennessee Warblers (*Vermivora peregrina*) from Orange-crowned Warblers (*V. celata*), Bay-breasted Warblers (*Dendroica castanea*) from Blackpoll Warblers (*D. striata*), and Connecticut Warblers *(Oporornis agilis)* from Mourning Warblers (*O. philadelphia*), and vice versa. However, we are confident of the accuracy of our identifications of the vireos and other species of warblers.

Figure 1. The study area. Localities within the study area include: A - West Kinsmen Park, B - Kinsmen Park, C - Queen Elizabeth Park, D - Skunk Hollow, E - Mill Creek, F - Cloverdale.



Results and Discussion

The 1979 Fall Migration: Although some warblers and vireos undoubtedly moved through the study area before and after the study period, 1979 was the only fall during which we accumulated enough information to describe the greater portion of a migratory movement. Our observations, which are summarized by 5 day periods, are presented in Tables 1 and 2 and Figure 2. These data are not adjusted for variations in effort between periods because unfortunately we kept no record of the duration of each visit. In spite of this we feel we have detected the most pronounced features of this migration, which included the fluctuations in the total number of birds and the change in species composition.

Highlights of the Warbler Migration: Periods 1 and 2 are characterized by relatively small numbers and by only two species: the Tennessee Warbler (73% of all birds observed and the Yellow Warbler (*Dendroica petechia*) (27%). During the next three periods (3, 4, 5) numbers rose considerably and 11 new species occurred. Tennessee Warblers still dominated (54%) with the American Redstart (*Setophaga*

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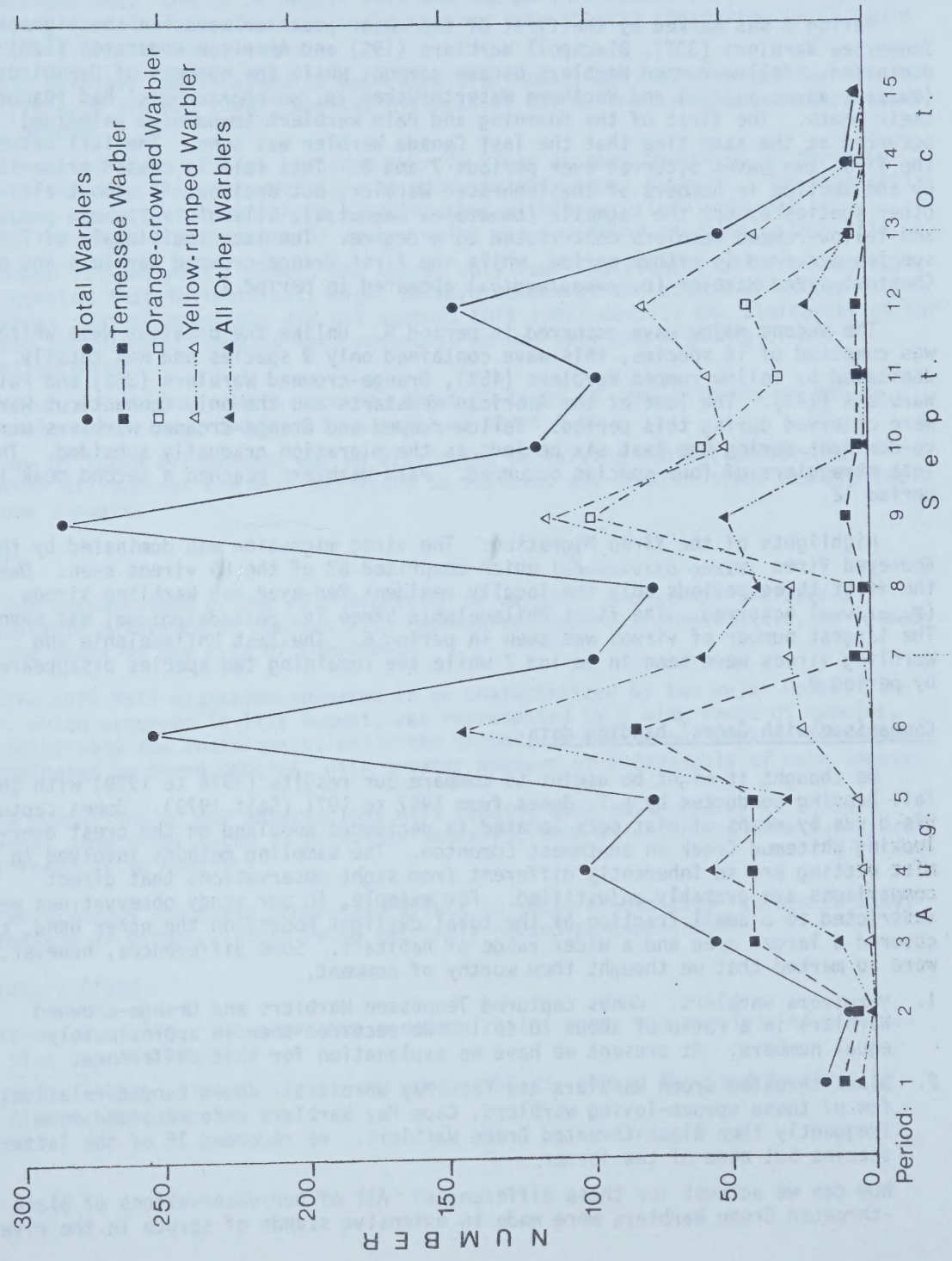
Figure 2. Number of warblers recorded in the study area, Fall, 1979.



ruticila) at a poor second (14%). The first Yellow-rumped Warblers (*Dendroica coronata*) appeared in period 3. By the end of period 5, 13 of 20 Black-and-White Warblers *(Mniotilta varia)*, 5 of the 10 Black-throated Green Warblers *(D. virens)*, and 9 of 11 Canada Warblers (*Wilsonia canadensis*) had been seen.

Period 6 was marked by the first of two major peaks or waves in the migration. Tennessee Warblers (33%), Blackpoll Warblers (19%) and American Redstarts (17%) dominated. Yellow-rumped Warblers became common, while the numbers of Ovenbirds (*Seiurus aurocapillus*) and Northern Waterthrushes *(S. novaboracensis)* had reached their peaks. The first of the Mourning and Palm warblers (*Dendroica palmarum*) occurred at the same time that the last Canada Warbler was seen. The lull between the first two waves occurred over periods 7 and 8. This lull is caused primarily by the decline in numbers of the Tennessee Warbler, but declines in almost all other species except the Magnolia (*Dendroica magnolia*), Wilson's *(Wilsonia pusilla)* and Yellow-rumped warblers contributed to a degree. The last individuals of 7 species occurred in either period, while the first Orange-crowned Warblers and only Chestnut-sided Warbler (*D. pensylvanica*) appeared in period 7.

The second major wave occurred in period 9. Unlike the previous wave which was composed of 15 species, this wave contained only 9 species and was totally dominated by Yellow-rumped Warblers (45%), Orange-crowned Warblers (38%) and Palm Warblers (14%). The last of the American Redstarts and the only Connecticut Warbler were observed during this period. Yellow-rumped and Orange-crowned warblers were co-dominant during the last six periods as the migration gradually subsided. The last stragglers of four species occurred. Palm Warblers reached a second peak in period 12.

Highlights of the Vireo Migration: The vireo migration was dominated by the Red-eyed Vireo *(Vireo olivaceous)* which comprised 63 of the 85 vireos seen. During the first three periods only the locally resident Red-eyed and Warbling Vireos (*V. gilvus*) occurred. The first Philadelphia Vireo (*V. philadelphicus*) was seen. The largest number of vireos was seen in period 6. The last Philadelphia and Warbling vireos were seen in period 7 while the remaining two species disappeared by period 9.

Comparison with Jones' banding data

We thought it might be useful to compare our results (1974 to 1979) with the fall banding conducted by E.T. Jones from 1957 to 1971 (Salt 1973). Jones captured his birds by means of mist nets located in deciduous woodland on the crest overlooking Whitemud Creek in southwest Edmonton. The sampling methods involved in mist netting are so inherently different from sight observations that direct comparisons are probably unjustified. For example, in our study observations were restricted to a small fraction of the total daylight hours; on the other hand, they covered a larger area and a wider range of habitats. Some differences, however, were so marked that we thought them worthy of comment.

1. *Vermivora* warblers: Jones captured Tennessee Warblers and Orange-crowned Warblers in a ratio of about 10 to 1. We recorded them in approximately equal numbers. At present we have no explanation for this difference.

2. Black-throated Green Warblers and Cape May Warblers: Jones banded relatively few of these spruce-loving warblers; Cape May Warblers were recorded more frequently then Black-throated Green Warblers. We recorded 15 of the latter species but none of the former.

   How can we account for these differences? All of our observations of Black-throated Green Warblers were made in extensive stands of spruce in the river

valley. Therefore, the presence of conifers may be a factor determining the occurrence of this species. Factors determining the occurrence of Cape May Warblers are unclear.

3. Chestnut-sided Warbler: Jones did not band any Chestnut-sided Warblers. We recorded two: one on 26 August 1976 and one on 1 September 1979. The apparent recent spread of the Chestnut-sided Warbler into Alberta (Nordstrom 1978) could account for our observations.

4. Palm Warbler: We recorded 79 Palm Warblers; Jones, only 8. Reasons for this difference are not clear; habitat differences may be involved, but further study is needed.

5. *Seiurus* warblers: Jones recorded over 10 times as many Ovenbirds as Northern Waterthrushes. We recorded them in approximately equal numbers. The apparently higher proportion of Northern Waterthrushes within our study area may be attributed to the presence of water, which was not found on Jones' study site.

6. Common Yellowthroat: Jones, who banded only four individuals of this species, suggested that Yellowthroats might be more common at the bottom of Whitemud Creek. Our observations did not support this idea; despite the similarity of our area to Whitemud Creek in many respects, we had only one sighting of a Yellowthroat.

7. *Wilsonia* warblers: Jones recorded about 30 times as many Wilson's as Canada warblers. We recorded them in a ratio of about 4 to 1.

Some of these differences may be attributed to varying habitat preferences. Other differences are more difficult to explain, and further study may provide some answers.

Summary

Our observations of the fall migration of warblers and vireos indicate a considerable diversity of species with impressive numbers of individuals, to be seen near the heart of the city of Edmonton.

The 1979 fall migration appeared to be characterized by two major waves. The first, which occurred in late August, was represented by a wide range of species, with relatively few individuals; while the second, in the second week of September, was dominated by three species, with greater numbers of individuals of each species.

A comparison of our observations with banding data collected by E.T. Jones suggested some differences in migration patterns, some of which could be explained by differences in habitat.

We strongly encourage other naturalists to venture into city ravines to study the passage of birds. It can be an extremely rewarding experience.

Literature Cited

Nordstrom, W. 1978. Notes on some uncommon rails, wrens and warblers of Alberta. Blue Jay 36:200-206.

Salt, W.R. 1973. Alberta vireos and wood warblers. Prov. Mus. and Archives of Alberta Publ. No.3.

Table 1. Number of warblers recorded in the study area, fall, 1979.

FIVE DAY PERIOD:	1 Au 1-5	2 6-10	3 11-15	4 16-20	5 21-25	6 26-30	7 Au31-Se4	8 5-9	9 10-14	10 15-19	11 20-24	12 25-29	13 Se30-Oc4	14 5-9	15 10-14	Total
Black-and-White W.			2	6	5	6	1									20
Tennessee W.	11	8	42	43	43	85	6	2	8	5	4	4				261
Orange-crowned W.							2	7	100	60	33	42	6	1		251
Yellow W.	6	1	4	3	5	9	2									30
Magnolia W.				4	1	3	4	3	4							19
Yellow-rumped W.			1	3	5	25	30	27	128	51	58	81	39	6	3	457
Black-throated Green W.			1	3	1	3	1	1								10
Chestnut-sided W.							1									1
Bay-breasted W.					1	2	2					1				6
Blackpoll W.				3	1	48	11	11								74
Palm W.						3	1	1	41		2	18	8			74
Ovenbird				3		10		2	1			2				18
Northern Waterthrush				1	2	12	2									17
Connecticut W.									1							1
Mourning W.						3		1								4
Wilson's W.				9	3	1	17	4	1	2						37
Canada W.				5	4	2										11
American Redstart			6	21	7	44	19	18	3							118
Total birds	17	9	56	104	78	256	99	77	287	118	97	148	53	7	3	1409
Species	2	2	6	12	12	15	14	11	9	4	4	5	3	2	1	18
Visits	4	2	3	5	3	4	5	4	5	2	3	3	4	2	3	52

Table 2. Number of vireos recorded in the study area, fall, 1979.

FIVE DAY PERIOD:	1	2	3	4	5	6	7	8	9
	Au 1-5	6-10	11-15	16-20	21-25	26-30	Au31 Se4	5-9	10-14
Solitary					1	3	2	4	2
Red-eyed	9	3	6	6	8	18	4	5	4
Philadelphia				1	1	2	1		
Warbling	2				1		2		
Total Birds	11	3	6	7	11	23	9	9	6
Species	2	1	1	2	4	3	4	2	2
Visits	4	2	3	5	3	4	5	4	5

F.H. WOLLEY-DOD, ALBERTA'S LEADING PIONEER LEPIDOPTERIST

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The following account is of a little known individual who did much to elucidate the natural history of Alberta. He was a true amateur in the sense of E.H. Strickland (1953), *i.e.* one of those who pursue a definite line of action simply for the love of so doing; certainly with no suggestion of financial gain, and at considerable cost to themselves.

Frederick Hova Wolley-Dod was born in England on 20 February 1871 and was educated at Eton where his father, Reverend Charles Wolley-Dod, held the position of one of the masters of the famous school for 40 years. Hova, as he was called, and his brothers grew up at Eton near Windsor, but returned to the family place, Edge Hall, in Cheshire for holidays.

This well educated and independently wealthy English gentleman arrived by train at Calgary in 1893. One of his older brothers, Arthur George Wolley-Dod, an engineer, had arrived in Calgary in 1887 and had bought 800 acres just south of the city, where he was ranching. On arrival F.H. Wolley-Dod had a collection of some three or four thousand British butterflies and moths and a serious desire to work with Alberta species. He took up residence near the mouth of Fish Creek, close to the southeast edge of Calgary.

Wolley-Dod started collecting butterflies and moths as soon as weather permitted and insects were flying. In May and early June he encountered, on dry prairie hillsides, butterflies of the genus *Oeneis* that were difficult to identify. These he gave to Henry J. Elwes of Cheltenham, England, who visited him in July 1893. Elwes (Elwes and Edwards 1893) found that some of the specimens were a species new to science, which he named *Oeneis alberta* ("the Alberta Arctic"), and

the others were the closely related *O. uhleri varuna*. Elwes also visited two years later, as Wolley-Dod (1901a) mentions that Elwes told him he collected a specimen of *Thecla dumetorum* in the foothills, 50 miles southwest of Calgary on or about 12 May 1895, and that he made a collection of *Lycaena pseudargiolus* "within a mile of my house," on 24 May 1895.

In late 1894 or early 1895 Wolley-Dod moved to a ranch 18 miles southeast of Calgary at the head of Pine Creek. F.C. Whitehouse was later (1919) to comment that "he loved his Alberta ranch at Midnapore next only to the Empire, and the science to which he devoted his leisure time for so many years." Work on the ranch demanded quite a lot of his time and in 1898 Wolley-Dod mentioned "I am generally too busy with other matters to devote more than one day in the week to butterfly catching." However, his net must have accompanied him at least part of the time on each sunny day.

Wolley-Dod collected primarily near where he lived. In 1893 and 1894 most specimens came from the mouth of Fish Creek, while those from 1895 to 1917 were mainly from his ranch at the head of Pine Creek or from nearby areas in the foothills, especially Billings Lumber Mill, 10 miles further west.

The mountains always intrigued him, but it was not until 1900 that he first collected there with later trips being made in 1902, 1904, 1905, and 1907. The Banff and Lake Louise areas were his favourites and his trips usually involved climbs to habitats above treeline, the only places where various alpine species could be found.

In the summers of 1901 and 1904, and then in company with his neighbour Arthur Hudson, in 1905 and 1907, he collected from Gleichen to the Circus Coulee area beside the Red Deer River near Dorothy. At the latter place he stayed at the Arthur Peake ranch. Peake, who emigrated to Alberta from England in 1883, had moved to the ranch in 1897 after living near Medicine Hat and Pine Creek (Roen 1971). On 5 July 1905 Wolley-Dod collected a swallowtail butterfly near Dorothy later described by J. McDunnough (1939) in his honour, *Papilio machon dodi*.

Arthur F. Hudson lived west of Wolley-Dod's ranch and collected with him for 12 to 15 years. He gave many specimens to Wolley-Dod and also sent many to systematic workers of the day. J.E. Smith named *Feltia hudsonii*, and Rev. George Taylor *Aplodes hudsonaria*, in his honour.

Wolley-Dod was especially interested in working with noctuid moths of which he said "their name is certain legion. These are primarily nocturnal and are best captured at bait or light. A molasses (treacle) mixture spread on fence posts was effective from mid June to mid September." He found "on one or two nights... moths positively swarmed on the treacled fence posts. About eighty moths on a single treacle patch at one time and 50-60 species in a night's treacling is about my record. They couldn't have been thicker on the treacle, simply because there wasn't room." The attraction of moths to light was less productive "though it produced several species that have not been captured by other means."

Early in his research, Wolley-Dod had to rely on the help of various specialists to identify his collection, especially where his knowledge was incomplete. This led him to send specimens to the Rev. George W. Taylor, of Wellington, B.C., author of the first enumeration of the land and fresh water shells of Alberta, and an authority on Geometrid moths. Taylor identified the material and, in addition, described five new species based in whole, or in part, on Wolley-Dod's specimens: *Eupithecia regina, E. alberta, E. dodata, E. adornata* and

Xanthorhoe circumvallaria (Taylor 1906a, b).

Though many people provided assistance, most help on general matters came from James Fletcher, Botanist and Entomologist with the Federal Department of Agriculture from 1887-1908, while much help with noctuid moths was provided by J.E. Smith of Rutgers College, New Jersey. Wolley-Dod had a good eye for species differences, rapidly became self sufficient, and soon came to be regarded as an authority on the North American species.

James Fletcher played a key role in encouraging amateurs to carry out research on insects, especially butterflies and moths. From 1893 to 1908, the year of his death, he made an annual trip from Ottawa to British Columbia, visiting and collecting along the way. He frequently corresponded with Wolley-Dod and, on 11 July 1903, collected with him at his ranch.

Specimens in Wolley-Dod's collection, and references in one of his publications (1901a) indicate that Wolley-Dod was in touch with Thomas Ebenezer Bean. Bean was Station Agent for the Canadian Pacific Railway at Laggan, now Lake Louise Station, from 1886 to 1895. He was a keen collector of butterflies and moths, and sent many specimens to William Henry Edwards, the author of "The Butterflies of North America." In the summer of 1893 Bean collected for three days with H.J. Elwes, the English *Oeneis* authority. This was the same year that Elwes had collected with Wolley-Dod.

Wooley-Dod was a member of "The Northwest (Canada) Entomological Society," which was formed in early 1899, with Percy H. Gregson of Waghorn as President (Anonymous 1899). This society was short lived and was dissolved at its fourth meeting in Calgary on 5 November 1902. The members then organized the "Territorial Natural History Society," to enlarge the scope of their work and attract many more nature observers who were interested in the study of other branches of nature (Jensen 1908). After Alberta became a province, the "Territorial Natural History Society" was dissolved and the "Alberta Natural History Society" was formed on 14 March 1906. Wolley-Dod held executive positions in these societies and also presented papers on entomology to them.

Regarded by many as Alberta's leading pioneer Lepidopterist, Wolley-Dod compiled from 1901 to 1906 the first list of butterflies and moths of Alberta. This list was based largely on his own collections but also incorporated those of Percy Gregson, Blackfalds; Arthur Hudson, Midnapore; Norman Sanson, Banff; and T.N. Willing, Olds. Later, from 1908-1915, Wolley-Dod published a series of additions and corrections to this list. Also included here were collections by Thomas Baird, High River; C.G. Garrett, Didsbury; F.C. Whitehouse, Red Deer; J.B. Wallis, Winnipeg; Norman Criddle, Aweme, Manitoba; and Arthur Bigson, Ottawa.

Wolley-Dod was a contributor to the Entomological Record of the Annual Report of the Entomological Society of Ontario from its inception in 1901 to his enlistment in the army in 1917. Under the leadership of James Fletcher, and later Norman Criddle, this publication played a unique role in promoting interest in entomology across Canada. It included notes on rarities or other matters, names of specialists who would help identify material, and recent pertinent literature. In particular it provided names and addresses of contributors, so that contact could be made between those of similar interests. Most amateurs and professional workers corresponded with the compilers and passed on items of interest.

In 1901 Wolley-Dod mentioned under *Argynnis nevadensis*, "I have examined a large number of specimens of both sexes, taken from the mouth of Pine Creek to the

foothills, and from Calgary to Sheep Creek, as well as some taken by Mr. Gregson at Lacombe and believe them to be all one species." This large fritillary with silver colouration on the hind wings below was later described by J. McDunnough (1924) as *Argynnis nevadensis calgariana* (now *Speyeria callippe calgariana*).

Though starting out as a general Lepidopterist, Wolley-Dod soon specialized in noctuid moths. This group was especially in need of attention as many species still had not been described. It is significant that over sixty of the species he collected turned out to be new to science. *Mamestra dodii* Smith and the genus *Dodia* were named in his honour. Wolley-Dod himself described five new moth species: *Autographa sansoni, Copabelepharon viridispersa, Cucullia omissa, Mamestra mutata,* and *Rhizagrotis querula*.

In late May, 1904, Mrs. de la B. Nicholl, Bridgend, South Wales, visited Wolley-Dod at his ranch and looked at his "fine collection of local moths and butterflies" then, from 14-25 July, collected with him in the Lake Louise area (Nicholl 1905). She returned to Alberta in 1907, collected with Wolley-Dod at Banff on 1 July and then later by herself in the Wilcox Pass area where she picked up, among other things, specimens of a fritillary that was later named in her honour as *Boloria eunomia nichollae* (Barnes and Benjamin 1926). Her collections were made for and deposited at the British Museum (Natural History), but a number of specimens from both trips were sent to Wolley-Dod and are now in the Canadian National Collection.

Norman Criddle, the leading pioneer entomologist of Manitoba, corresponded with, and sent specimens to, Wolley-Dod as early as 1905. Criddle worked for a while in Calgary in 1914 and certainly visited Wolley-Dod at least once during that time.

In 1907, Wolley-Dod described a new species *Chrysophanus arethusa*, now *Lycaena phlaeas arethusa* (the Arethusa Copper), from material he had collected from the foothills near Sheep Creek. This bright coloured, alpine, butterfly is now known from Crowsnest Pass north to Jasper National Park.

After Wolley-Dod completed his "Preliminary List of the Macro-lepidoptera of Alberta" he made a serious attempt to clear up problems. It represented his best thoughts at the time and those of others, but he realized that many determinations were tentative. New information came in, and study of further collections made him doubt the validity of certain species concepts. This led him to visit the British Museum (Natural History) in London from January to March 1909, so that he could study the extensive collections deposited there. Following this, early in 1910, he travelled to the eastern United States to study material at the United States National Collection, Washington, D.C.; the American Museum of Natural History, New York; and collections at Rutgers College, New Jersey, and in Chicago and Brooklyn. Then, in March 1912, he again returned to England to study material at the British Museum. This, together with further studies of his own material led to the publication of a series of papers in which he attempted to clarify some taxonomic problems.

On his visit to London in 1912, Wolley-Dod met W.H.T. Tams, the son of a photographer in Cambridge, and asked him to become his entomological assistant. Tams did so and soon became totally absorbed in collecting, setting, arranging, and cataloguing specimens. He also prepared genitalic mounts for critical systematic research. When Wolley-Dod enlisted in the army, Tams returned to England where he was appointed Curator of Lepidoptera at the British Museum with no further training (Strickland 1953).

In June 1915 Wolley-Dod was visited at his ranch by Norman Sanson, curator of the Banff Museum (Bird 1976). Sanson had corresponded with him for years, no doubt was visited by him at Banff, and had received his help in the identification of difficult moth specimens. In 1910 Wolley-Dod described in his honour, a moth *Autographa sansoni*.

Also in 1915, E.H. Strickland, the first professional entomologist with the Federal Department of Agriculture in Alberta, and later Head of the Department of Entomology at the University of Alberta, visited Wolley-Dod. Strickland had been studying cutworms which were damaging crops severely in the Lethbridge area and had brought large numbers of the cutworm moths which he had collected to Wolley-Dod for identification.

J.B. Wallis had his interest in natural history whetted by Norman Criddle and James Fletcher when he was teaching school at Treesbank, Manitoba, from 1897-1902. He started contributing to the Entomological Record in 1906, was in touch with Wolley-Dod shortly after that, and likely visited him at least once during trips to Alberta in 1907, 1909, 1912 and 1915. When Edwin Firmstone Heath, an enthusiastic amateur who had collected for at least 30 years at Cartwright, Manitoba, and with whom Wolley-Dod had corresponded, died in 1914, J.B. Wallis was asked to prepare Heath's extensive collection of local Lepidoptera for deposit in the Manitoba Provincial Museum. Wallis in turn asked Wolley-Dod for help with the result that the two of them got together in Winnipeg in late 1915 and spent two weeks going over the collection. They identified what they could and then sent the remaining specimens away to experts for identification or verification. The resulting papers, written by Wolley-Dod, listed all butteflies and moths in the collection. It was a unique contribution, as little had been published previously on the Manitoban Lepidoptera.

After the outbreak of World War I in 1914, a strong sense of loyalty to the British Empire filled Wolley-Dod with desire to join the army and do his part. His age and physical condition initially prevented this but, eventually, in 1917, he obtained a commission as a Second Lieutenant with the Yorkshire Light Infanty, and became attached to the Macedonian Labor Corps. He wrote from there to F.C. Whitehouse, shortly after the war ended that "he must set up his Macedonian material, do a little collecting in England for old times sake, and then for Canada, and a trip into the mountains for alpine stuff." This was not to happen as he died at the age of 48 on 24 July 1919 of gastroenteritis at 49 Hospital, Chanak, Macedonia (Whitehouse 1919).

E.H. Strickland also joined the Armed Forces. When he returned to Canada shortly after the end of the war, one of his first duties was to pack and send Wolley-Dod's huge collection of some thirty thousand specimens to J. McDunnough in Ottawa for incorporation into the Canadian National Collection.

Wolley-Dod's death came at the peak of his scientific career. One wonders how much he would have accomplished had he lived longer. The fact that he was self-trained is a reminder to us all that capable amateurs are needed and can do much. A vast amount of knowledge on natural history of Alberta has come from them.

Publications by F.H. Wolley-Dod

1895. Spring collecting in Alberta. Can. Entomol. 27:176-178.

1898. Notes on some Alberta butterflies. Can. Entomol. 30:298-300.

1901a. Preliminary list of the Macro-lepidoptera of Alberta, N.W.T. Can. Entomol. 33:40-42, 157-172.

1901b. *Pyrameis cardui*. Can. Entomol. 33:237.

1904a. Jocular entomology. Can. Entomol. 36:179-180.

1904b. Strange attempted hybridization in nature. Can. Entomol. 36:288.

1904c. Preliminary list of the Macro-lepidoptera of Alberta, N.W.T. Can. Entomol. 36:345-355.

1904d. Insects (Lepidoptera) of the year 1903. Territorial Natural History Society. Pp. 198-200 in Ann. Rept. Dept. Agr., N.W.T. 1903.

1905a. Preliminary list of the Macro-lepidoptera of Alberta, N.W.T. Can. Entomol. 37:17-28, 49-60, 145-156, 173-184, 221-230, 241-252.

1905b. Butterfly and moth collecting. Pp. 162-167 in Ann. Rept. Dept. Agr., N.W.T. 1904.

1906. Preliminary list of the Macro-lepidoptera of Alberta, N.W.T. Can. Entomol. 38:45-54, 89-94, 253-267.

1907. Notes on *Chrysophanus hypophlaeas* and its allies, with description of a new species. Can. Entomol. 39:169-171.

1908a. Further notes on Alberta Lepidoptera. Can. Entomol. 40:149-156, 181-193.

1908b. *Argynnis astarte* Doubleday-Hewitt, and other high mountain butterflies. Entomol. News 19:108-114.

1908c. Notes and additions to the British Columbia check list of Lepidoptera. Bull. B.C. Entomol. Soc. 9:2-4.

1910a. Noctuid notes. Can. Entomol. 42:189-193.

1910b. A new Autographa from the Alberta Rockies. Can. Entomol. 42:349-350.

1911a. Habits of *Smerinthus geminatus* Say, and *S. cerisyi* Kirby. Can. Entomol. 43:104.

1911b. Further notes on Alberta Lepidoptera. Can. Entomol. 43:143-156, 229-236, 281-286, 321-327, 329-339, 361-369 393-399.

1912a. Further notes on Alberta Lepidoptera. Can. Entomol. 44:33-39.

1912b. *Smerinthus cerisyi* Kerby and *Smerinthus opthalmicus* BDV. Can. Entomol. 44:299-300.

1913a. Further notes on Alberta Lepidoptera, with description of a new species. Can. Entomol. 45:29-34, 61-68.

1913b. Further notes on Alberta Lepidoptera. Can. Entomol. 45:93-98, 129-134, 136-192, 236-244.

1914. Further notes on Alberta Lepidoptera. Can. Entomol. 46:393-403.

1915a. Further notes on Alberta Lepidoptera, with description of a new species. Can. Entomol. 46:1-8, 33-42.

1915b. Further notes on Alberta Lepidoptera. Can. Entomol. 47:122-134.

1916a. Nocutid notes from western Canada, with descriptions of two new species and a variety. Can. Entomol. 48:58-70.

1916b. The Heath collection of Lepidoptera. Can. Entomol. 48:161-167, 226-232, 375-380.

1916c. A change of synonymy in *Xylomiges* (Lepid.). Can. Entomol. 48:367-368.

1917a. The Heath collection of Lepidoptera. Can. Entomol. 49:81-92.

1917b. The insect collections of Canada. Collection of Macro-lepidoptera owned by F.H. Wolley-Dod, Midnapore, Alta. Can. Entomol. 49:240-248.

1918. Notes on Barnes and McDunnough's "Check list of Lepidoptera of Boreal America." Can. Entomol. 50:8-16, 43-51.

Literature Cited by Authors Other Than Wolley-Dod

Anonymous. 1899. The Northwest (Canada) Entomological Society. Can. Entomol. 31:80.

Barnes, W. and F.H. Benjamin. 1926. Notes on the diurnal Lepidoptera, with additions and corrections to the recent "List of diurnal Lepidoptera." Bull. S. Calif. Acad. Sci. 25(3):88-96.

Bird, C.D. 1976. Rhopalocera in the N.B. Sanson collection. J. Lepid. Soc. 30:201-206.

Elwes, H.J. and J. Edwards. 1893. A revision of the genus *Oeneis*. Trans. Entomol. Soc. London 1893(4):457-481.

Jensen, J. 1908. First annual report of the Alberta Natural History Society. Alta. Dept. Agric. Ann. Rept. 1907:165-173.

McDunnough, J. 1924. Some new Canadian Argynnid races (Lepid.). Can. Entomol. 56:42-43.

McDunnough, J. 1939. A new race of *Papilio* belonging to the *machon* complex. Can. Entomol. 71:216-217.

Nicholl, Mrs. de la B. 1905. Butterfly collecting in Canada, 1904. 36 Ann. Rept. Entomol. Soc. Ont. 19:70-80.

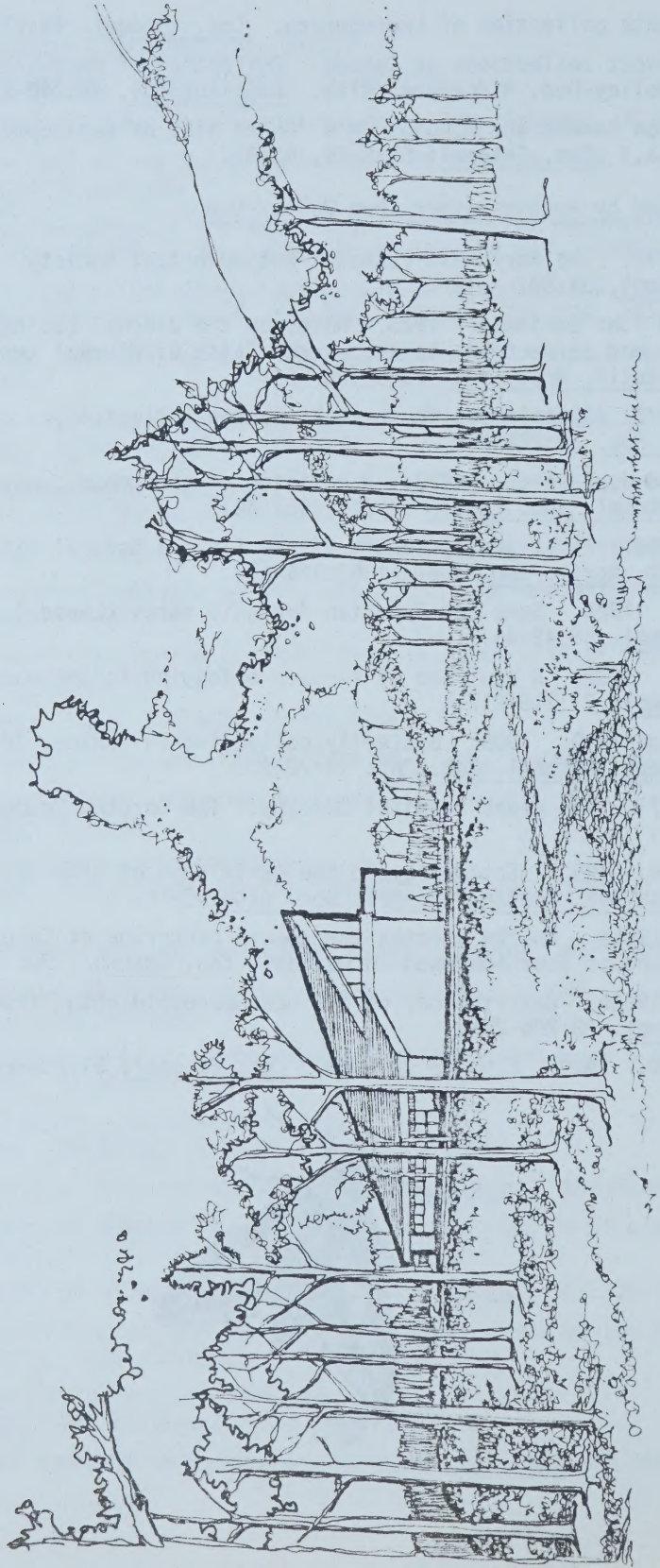
Roen, H.B. 1971. The grass roots of Dorothy. The Dorothy Community, Dorothy, Alberta.

Strickland, E.H. 1953. Entomology in the early days of Alberta. Proc. First Ann. Meeting Entomol. Soc. Alta.:5-12.

Taylor, G.W. 1906a. On the species *Eupithecia* occurring at Calgary, Alberta, with descriptions of four supposed to be new. Can. Entomol. 38:101-104.

Taylor, G.W. 1906b. Descriptions of two new Geometrid moths from Alberta. Can. Entomol. 38:205-206.

Whitehouse, F.C. 1919. F.H. Wolley-Dod. Can. Entomol. 51:239-240.



THE LETHBRIDGE NATURE INTERPRETIVE CENTRE

by

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The origin of this proposed building came out of the City of Lethbridge River Valley *ad hoc* committee report.

In 1969 the City circulated a questionnaire to interested groups and individuals concerning the future of the Old Man River valley. Later, public meetings were held, and as a result of the concerns and ideas that were expressed, Council hired Neil Andrews for the summer to conduct a study of the valley and to make recommendations. His report was presented to Council in November 1970. Soon after this an *ad hoc* committee was formed to look at the report in detail and to make proposals that would lead to some form of schedule for the development of the river valley as an urban park.

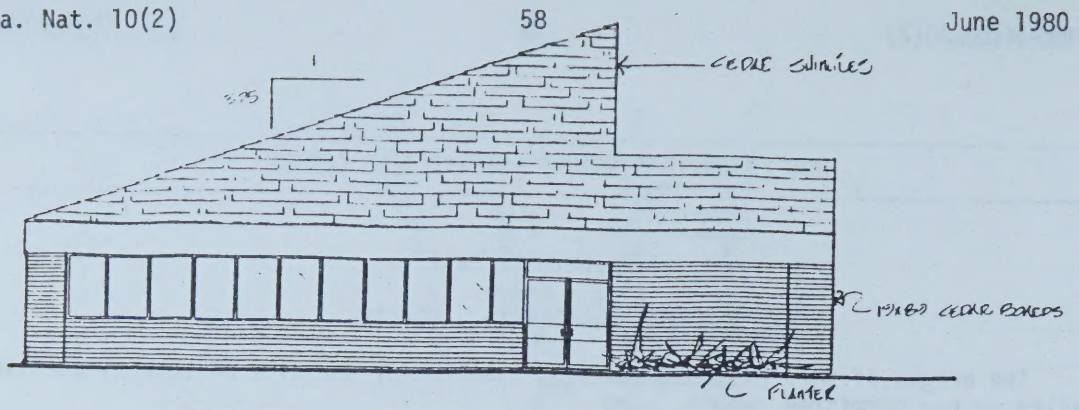
Among the schedule of areas and permitted uses are Resource Areas 5 and 6, consisting of 91 and 105 acres respectively, which consists of all the land bounded by Highway 3, the High Level bridge and the river. These areas are designated Ecology Reserve and Wildlife Habitat, and the specific uses are:

Nature Centre
Hiking Trails
Nature Trails

The Nature Centre was one of the priorities under the Major Recreational Facilities Plan, but with so many demands upon these funds, it was decided to find the money elsewhere, and as a result the two school boards were approached with the suggestion that the grants they receive annually from Project Co-Operation should be assigned for 2 years to this building. This the boards did, and the money was put aside for the centre.

The architect asked to do the design was a local man, Richard White, who has also done the drawings for the Field Guide to the Nature Reserve. The sketches and plans that accompany this article are supplied by him. The first design was ready nearly two years ago, but inflation kept catching up with the designs, and the end result is considerably changed in order to fit into the budget.

However everything is there that is basically needed for the purposes we have in mind... a room in which to talk to people, and where busloads of school children can gather out of the wind, a smaller room where exhibits can be set up, and the necessary offices.



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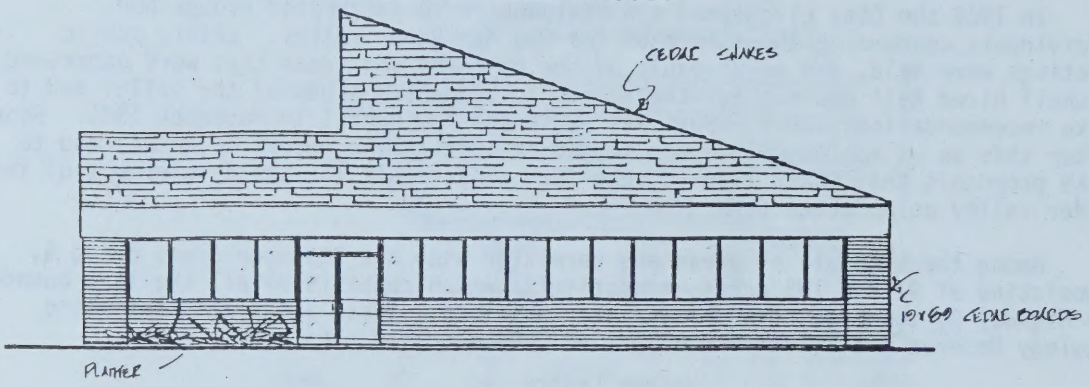

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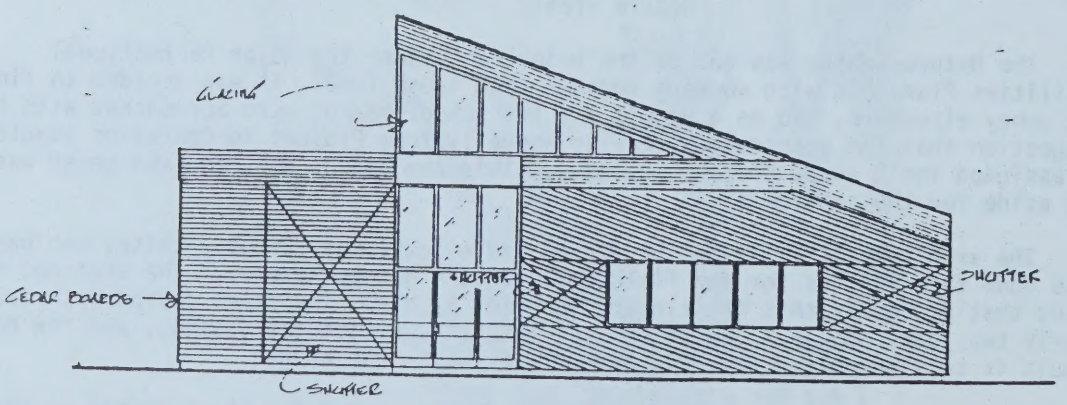

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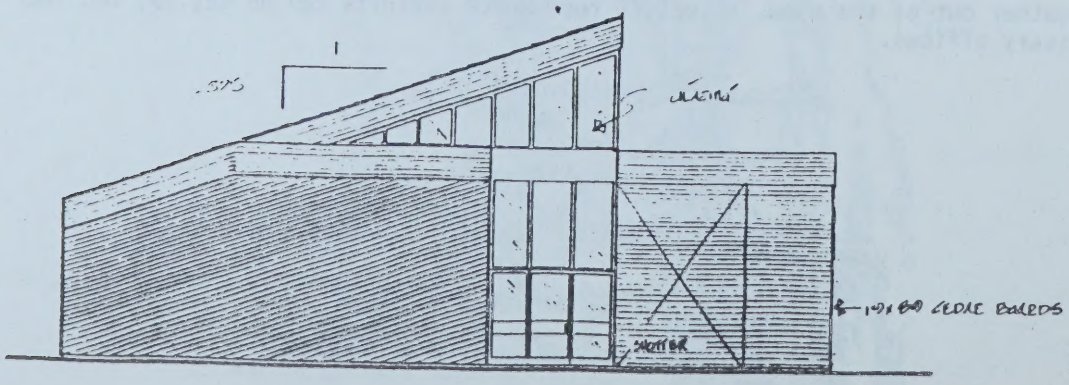

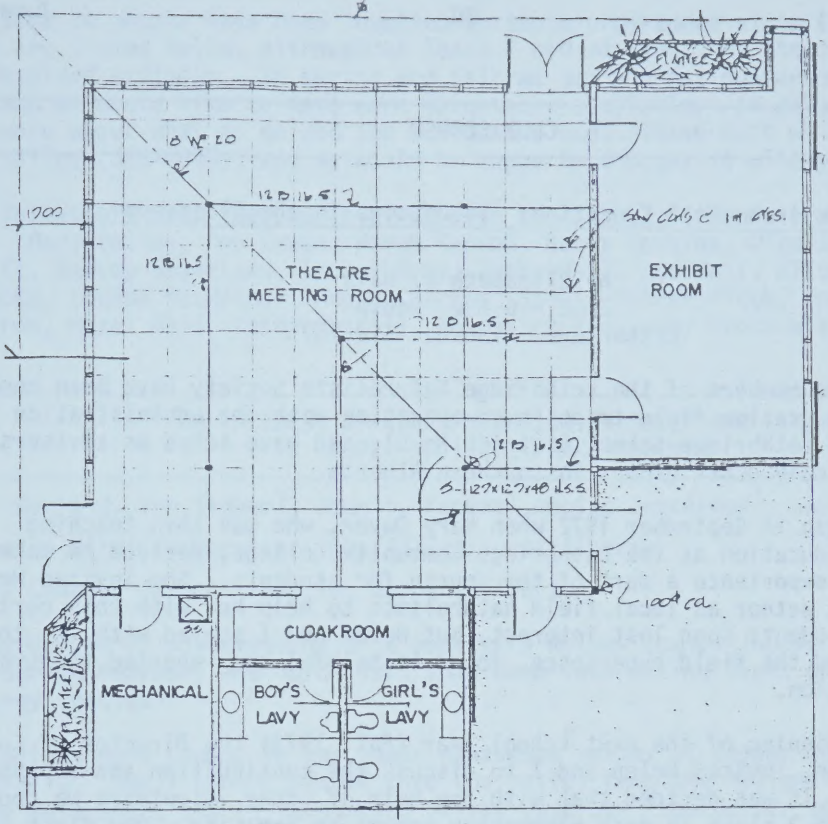
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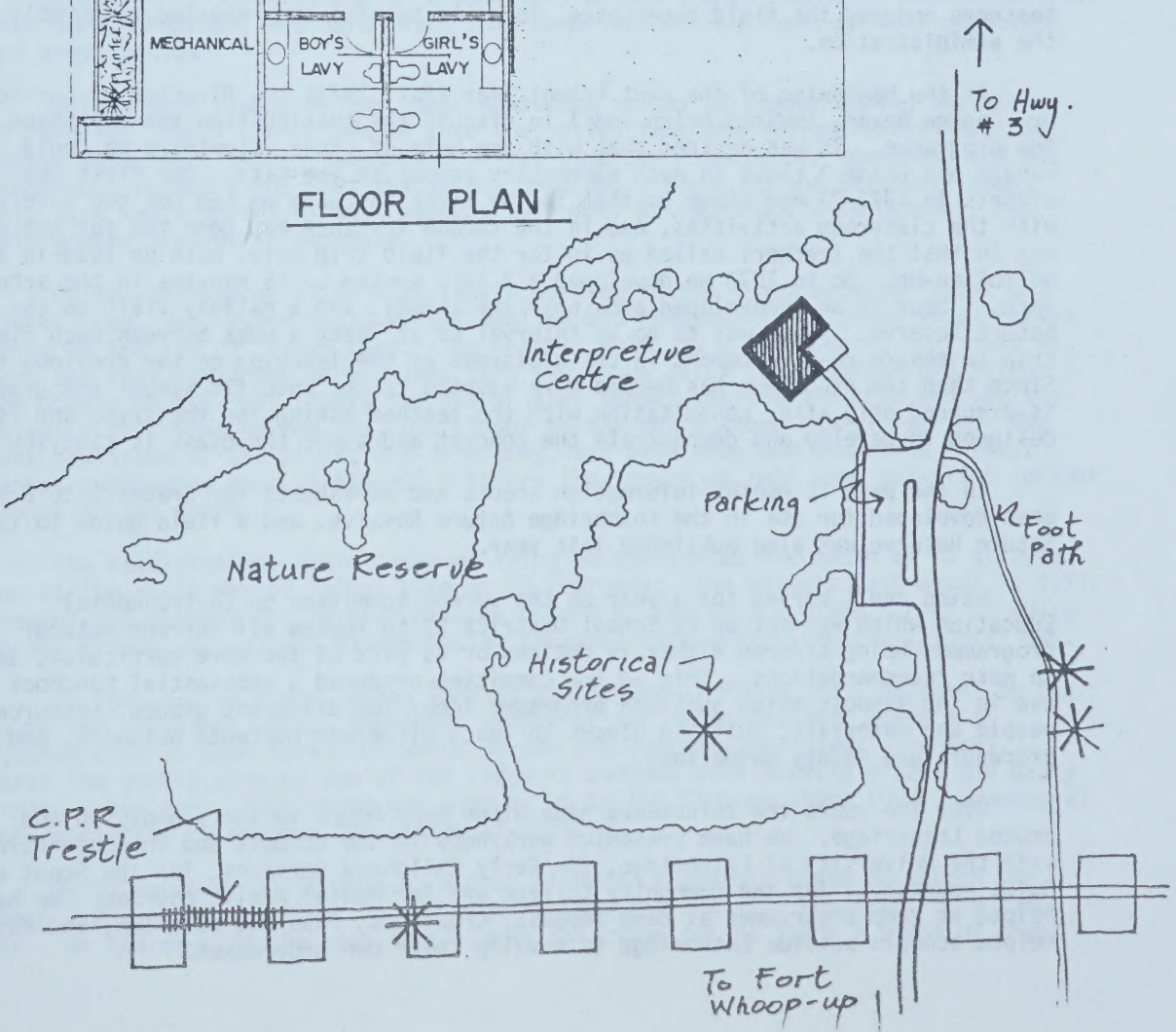
To Hwy. #3
Interpretive Centre
Parking
Foot Path
Nature Reserve
Historical Sites
C.P.R Trestle
To Fort Whoop-up

CLUB CORNER

Environmental Education: Volunteers in the Classroom

by Elizabeth C. Hall
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For 8 years members of the Lethbridge Naturalists Society have been conducting environmental education field trips in co-operation with the administration and teachers of the Lethbridge School District No.51, and have acted as advisers and programmers to many other groups in southern Alberta.

It all began in September 1972 when Mary Dwyer, who was then teaching Environmental Education at the Lethbridge Community College, decided to make classroom and field experience a part of the course for students. She invited Helen Schuler and the author as local field naturalists to help her with this part of the course. The students soon lost interest, but Helen and I stayed with it; the teachers enjoyed the field experience, found it helpful and reported favourably to the administration.

At the beginning of the next school year (Fall 1973) the Director of Curriculum, Dr. George Bevan, invited Helen and I to discuss the continuation and expansion of the programme. It was decided that with the help of other volunteers we could manage one Grade 3 class in each elementary school in the City. Our first two efforts in 1972-73 had shown us that in the first instance we had got too involved with the classroom activities, and in the second instance had gone too far the other way in that the teachers called us in for the field trip only, with no lead-in and no follow-up. So in 1973 we developed a 3 trip system... 15 minutes in the schoolyard, 1 hour in an undeveloped area near the school, and a halfday visit to the Nature Reserve. There was to be an interval of at least a week between each field trip to ensure re-inforcement in the classroom of the learning on the previous trip. Since then the programme has become more adapted to the specific school and grade; is prepared only after consultation with the teacher asking for the trip; and is designed to develop and demonstrate the concept and topic the class is studying.

In the past 12 months information sheets and worksheets for Grades 3 to 6 have been developed for use in the Lethbridge Nature Reserve, and a field guide to the Nature Reserve was also published last year.

Helen and I served for a year on the *ad hoc* committee on Environmental Education which was set up by School District 51 to review all current outdoor programmes being offered either as options or as part of the core curriculum, and to make recommendations. This *ad hoc* committee produced a substantial handbook for use in the schools which outlined programme ideas for different grades, resource people and materials, suitable places to teach different concepts outdoors, and procedure and safety guidelines.

Over the years the volunteers have given many hours to the schools in and around Lethbridge. We have presented workshops in the schools and in conjunction with the University of Lethbridge, for Early Childhood Services, for the Scout and Guide movements, for the Community College and for Mental Health courses. We have helped at camp programmes at Camp Impeesa, Crows Nest Pass and Waterton, and have helped schools outside Lethbridge to develop their own programmes.

Some 24 people have been involved in these programmes since 1972 and their names are listed below, although at least 2 are missing. At the moment 8 of these are involved actively. In spring and fall we get a great number of requests for help and we would like to have more volunteers available. If anyone would like to hear more about what we do and the methods we use, please call me (327-8866) or Mary Bailey (328-0088), and we would be happy to discuss it with you.

Volunteers from the LNS involved with the School Field Trip programme have been: Mary Bailey, Ann Brown, Marge Cannon, Becky Cousins, Olga Dawson, Connie Goodall, Audrey Graveland, Isabel Gray, Jacky Hall, Liz Hall, Alice Harper, Fran Hiscocks, Louise MacArthur, Ann McCracken, Sheila Petherbridge, Doris Rhodes, Lynn Richards, Hazel Ross, Cathy Russell, Helen Schuler, Judy Stockdale, Diana Williams.

AN INCIDENT OF WOLF PREDATION ON SHEEP AND ELK IN JASPER NATIONAL PARK, ALBERTA

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by Kevin J. Van Tighem[1], John L. Kansas[1], Brian Jesperson[1], and Dee Allison[2]

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A series of observations of a pack of 9 Wolves (*Canis lupis*) in Jasper National Park during February and March 1979 shed some interesting light on Wolf predation and prey species.

Wolves were common in the lower Athabasca Valley of Jasper during the winter of 1978/79. Small groups ranged into the valley from the Maligne watershed, the Miette watershed, and the Athabasca Valley upstream from Jasper townsite, and one large pack ranged throughout the valley from Henry House to the East Gate area. This pack was reported by park wardens to number 12 individuals in October, but only 9 were present in February.

On 20 February at 11:00 a.m., while working in the dunes between Talbot and Jasper Lake, Van Tighem heard Wolves howling and subsequently sighted seven Wolves lying on the ice of Jasper Lake. The nearest Wolf, 50 m from shore, continued to bark and howl until two more Wolves left the dunes below the observer and joined the others on the ice. About two hours later Kansas visited the site and saw the Wolves still lying on the ice, but closer to the north shore than formerly. The pack consisted of six black, one dark grey, one pale grey and one white animal. Kansas approached them within 300 m before they moved up into open grassland juniper slopes to the north.

The same pack was again observed lying on the ice at the mouth of an alluvial fan at the south end of Talbot Lake on 25 February. The animals laid about in full view of the highway for several minutes before moving into a mixed forest of White Spruce (*Picea glauca*) and Balsam Poplar (*Populus balsamifera*) on the alluvial fan.

An open grassy ridge, known locally as Cinquefoil Ridge, runs adjacent to the south end of Talbot Lake. The lower slopes of the ridge are very steep and covered with an open forest of White Spruce and Juniper (*Juniperus communis*), while the gently sloping top of the ridge is covered with heavily grazed and badly eroded grassland. This ridge was used by up to 116 Bighorn Sheep (*Ovis canadensis*) intermittently throughout the winter of 1978/79.

On 27 February at 10:00 a.m. Kansas climbed Cinquefoil Ridge to search for sheep. Alerted by barking, he saw eight Wolves fleeing into the trees 20 m from him. At the edge of the open forest near the ridge-top he found a piece of sheep

hide and blood stained snow. Tracks indicated that Wolves had killed the sheep, fed on the carcass, and dragged away a portion.

On the afternoon of 27 February, Allison visited the area and walked across the ice of Talbot Lake to the base of Cinquefoil Ridge, attracted by a concentration of Common Ravens (*Corvus corax*) and Black-billed Magpies (*Pica pica*). At the foot of a sloping, stepped cliff face with numerous small White Spruce, she found the remains of a freshly killed seven-point bull Elk (*Cervus canadensis*). Tracks indicated that the Elk had fallen or been chased off the cliff onto the ice and had been killed by the Wolves about 20 m along the lakeshore from its point of impact. The Wolves continued to visit the kill, apparently at night, for three days.

Jesperson observed the Wolves feeding on a freshly killed sheep on the morning of 2 March at the base of Cinquefoil Ridge about 25 m from the edge of Highway 16. A strong wind was blowing, but there were tracks visible showing that the sheep had been dragged down the edge of the ridge from the top. Since the animal's head was missing there remains an element of doubt as to whether this was an actual Wolf kill or an animal which had been poached and left, then salvaged by the Wolves.

Sheep were observed regularly on Cinquefoil Ridge throughout the winter. A group of six large bull Elk were present on the ridge from at least 24 February. Subsequent to the Wolf activity described above, no sheep or Elk were seen on Cinquefoil Ridge until 29 April 1979. Murie (1944) describes the temporary abandonment of winter ranges by Dall Sheep (*Ovis dalli*) during periods of high Wolf activity. It is possible that use by Wolves of ungulate winter ranges that are accessible and traditionally heavily populated may serve to disperse ungulates into areas that are usually less favoured. If this is the case, large carnivores such as Wolves may be factors in relieving the pressure on heavily grazed ungulate ranges.

Our observations suggest that a pack of Wolves, having found an accessible and isolated ridge used heavily by ungulates, adopted a hunting strategy that led to their capture of one (and possibly two) sheep and an Elk before the prey abandoned the area in favour of slopes having more extensive escape terrain in the area.

These observations were made during surveys for the Banff-Jasper Biophysical Wildlife Inventory. Major funding is provided by Park Canada. We thank Geoff Holroyd and Lu Carlyn, Canadian Wildlife Service, and Valerius Geist, University of Calgary, for comments on earlier drafts of this note.

REFERENCES

Murie, A. 1944. The Wolves of Mount McKinley. U.S. Govt. Printing Office, Washington.

Carbyn, L. 1974. Wolf population fluctuations in Jasper National Park, Alberta, Canada. Biol. Conserv. 6:94-101.

FIRST NESTING RECORD OF THE MOUNTAIN PLOVER IN CANADA

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While on a foray to the Milk River Canyon area of southeastern Alberta on 25 May 1979, a group of Alberta Parks and Natural Areas personnel discovered nesting Mountain Plovers (*Charadrius montanus*). Just before mid-day most of us were observing the activities of some Short-horned Lizards along a coulee rim. Val Loewen was looking for rare plants when she saw a bird which, at first glance, she thought was a Killdeer (*C. vociferus*). Realizing that it was not a Killdeer, but thinking that it must be something common, she began looking through her Field Guide to the Birds of North America (Robbins *et al.* 1966). When Val saw the Mountain Plover illustration, she immediately recognized it as being the same as the bird she was observing. However, the range maps in the field guide did not indicate the presence of this species in Canada. A little later, she saw at least one more Mountain Plover, and then two birds flew away.

On returning to the group, she inquired whether Mountain Plovers occur in Alberta. It was difficult to contain our excitement. We went over to the general area where she saw the birds, then sat down and waited until one bird came into sight. It proceeded alternately to run in short spurts and stop and look before it finally fluffed out its feathers and squatted down on its nest. We concentrated our eyes on the spot and went over towards the nest. The bird walked away and we found a nest with three eggs - the first substantiated Canadian nest record of Mountain Plovers.

The nest itself was a shallow scrape lined with shredded cow chips and small pieces of plant materials. The habitat around the nest was moderately rolling country near a drainage which had been recently burned and winter-grazed fairly heavily. Consequently, the vegetation was very short and was characterized by a growth of blue grama (*Bouteloua gracilis*) and sedges (mostly *Carex filifolia*).

While we were observing the nest, Norbert Kondla and Wayne Nordstrom saw another bird at a site about a hundred metres east. Later observations revealed another nest at this site and more breeding birds in the vicinity (Wallis and Wershler 1980).

The nesting of Mountain Plovers here is not likely an accidental occurrence. Historical accounts by Coues (1878) indicate that Mountain Plovers were "breeding in considerable numbers" along the Canada - United States boundary between the Frenchman River in Saskatchewan and the Milk River in Alberta. In fact, he collected one adult on 23 July 1874 adjacent the international boundary where the Milk River crosses the border.

There are few other records of the Mountain Plover in Alberta. Salt and Salt (1976) cite the following records: four birds including two males which were collected on 22 June 1941 near Wildhorse; two birds in the Cypress Hills on 12 June 1966; and one bird on 5 July 1971 about 20 miles west of Wildhorse. It is probable that all but the Cypress Hills birds were nesting in the vicinity. On 30 September 1977 W. Smith and C. Wallis observed a family group of five Mountain Plovers northeast of Onefour. Subsequent searches in this area during the breeding season have not revealed any nesting Mountain Plovers. However, they are

relatively unobtrusive and easily overlooked.

Mountain Plovers require very short grass for nesting as well as patches of taller vegetation later in the summer (Graul 1976). In order to ensure their continued success in Canada, heavy grazing must be continued in certain areas within the context of a patchwork of heavily, moderately, lightly, and un-grazed sites. This diversity of grazing regimes will also help maintain a broad spectrum of grassland plants and animals. In addition, the Mountain Plover should be placed on the Alberta list of endangered species to ensure that adequate consideration and research will be given to this species which was once a characteristic inhabitant of this part of Alberta.

The authors would like to thank the Government of Alberta, Public Lands and Parks Divisions, for supporting the study of the unique habitats and associated life forms in this part of Alberta.

Literature Cited

Coues, E. 1878. Field-notes on birds observed in Dakota and Montana along the Forty-ninth Parallel during the seasons of 1873 and 1874. Article XXV in Bull. U.S. Geol. and Geogr. Surv. V.IV:545-661.

Graul, W. 1976. Breeding status of the Mountain Plover. Condor 78:265-267.

Robbins, C.S., B. Braun and H.S. Zim. 1966. Birds of North America. Golden Press, New York.

Salt, W. and J. Salt. 1976. The Birds of Alberta. Hurtig, Edmonton.

Wallis, C. and C. Wershler. 1980 (*in litt.*) First nesting records and status of the Mountain Plover (*Charadrius montanus*) in Canada.

BLUEBIRD TRAILS IN ALBERTA

by J.C. Finlay
Site 9, RR 2
Sherwood Park, Alta.

Bird boxes have been placed on fence posts along country roads to encourage the return of bluebirds for several years in North America. The Canadian west saw the first organized effort to bringing back bluebirds using bird boxes along roadways by Jack Lane and his Brandon Junior Birders in 1959. Three years later, Stuart Houston and his group in Saskatoon began setting out boxes there. This practice, of setting out Bluebird Trails spread to Alberta in the spring of 1971. The previous fall, Joy Finlay, who had operated a Junior Naturalist programme for Edmonton Parks and Recreation since 1969, decided to have these young naturalists start the first Alberta Trail. Alex Allen, an Edmontonian, was invited to speak on the hole-nesters and type of box; Brett Finlay and Margaret Francis, two of the young naturalists, wrote to other groups for information; Myrtle Leadley, in charge of special programmes for Edmonton Parks and Recreation, obtained a donation of boards from Clark Lumber; materials, young people and instructors gathered at the Kinnaird Community Hall rink shack on Rat Creek Ravine and construction began. Bird house building continued all fall and winter at the regular weekly meeting times, interspersed with other activities, including snowshoe trips. Adults who helped Joy in this early programme included Jack Park, Eileen and Fred Coffee, Bob Francis and the Christensens. Late in the spring, the group moved to the Whitemud Lodge on the Creek by the same name. Additional material was then obtained through

donations from the Fort Edmonton Project and Ziedler Plywood, plus a $50.00 contribution by Fibre Glass Canada Ltd. for nails, etc.

The construction phase ended in very early April with the help of John Rogers and Peter Demulder. On 9 April 1971 the big day arrived. The first boxes were set out four miles east of Elk Island Park, north of Highway 16. The first trail in Alberta had begun. Snow was still deep. The Coffees, Christensens, Parks and of course the Finlay family used snowshoes to cross ditches. We still remember some of the young people slipping off the snowshoes and almost disappearing.

The trail was opened officially by the Honourable Dr. J. Grant MacEwan, then Lieutenant Governor of Alberta when he nailed the 125th box on a post behind the lodge at Whitemud Park in Edmonton on 1 May 1971. Dr. MacEwan then accompanied the group of about 35 young people to erect the remaining houses east of the city. This first line began two miles south of Sherwood Park and continued east to the road on the west side of Elk Island, north to Highway 16, then east to hook up with those erected in April. This line extended north to the north side of the Park and then west to Fort Saskatchewan.

The first summer was a success with 5 pair of Mountain Bluebirds (*Sialia carrucoides*) fledging 21 young. Vandalism of 38 boxes that year was a surprise. However, after the first couple of years little to no vandalism occurred. It seems that every new trail brings a high rate of vandalism the first year, but this drops off when local people begin protecting the boxes.

In that same spring of 1971 when Joy was setting out boxes with the young people, Edgar T. Jones erected some bluebird boxes around his property on Hastings Lake and on the roadside nearby.

In 1972, Edmonton Natural History Club members agreed to take over the Jr. Naturalists' trail, since most of the adults who had helped Joy were also members of the club. Additional sections were added north and west of Edmonton. Another 24 were erected around Thunder Lake west of Barrhead by J. Kinnaird and the Finlays. Also that year, Edgar T. Jones was able to obtain funds under an Opportunities for Youth Federal Grant. Ken Trann and some friends used that money for the summer to set out several hundred boxes around Cooking Lake - Beaverhill Lake.

The following year, 1973, the Edmonton Natural History Club maintained their trail but the Jones-Trann houses were mainly unattended. Consequently, in the spring of 1974, Loran Goulden, then president of the Edmonton Natural History Club, arranged with Mr. Jones to have the Club take over the Jones-Trann section.

In the spring of 1974, a new supply of bird boxes suddenly became available when Horace Ramsell, Edgar T. Jones and Bill Morgan through the Alberta Wildlife Foundation were able to obtain a major grant under a Local Initiative Program of the Federal Government. These funds allowed Mr. Ramsell and several handicapped lads to produce 3,000 bluebird boxes. These boxes were distributed throughout Alberta by boy scouts and others. Club members obtained several hundred to replace vandalized boxes and add new sections. The 1974 year closed with 791 boxes set out in all four directions from Edmonton.

The next season Horace Ramsell with the help of handicapped young men and Ian Young, produced another estimated 3,000 boxes which were distributed around the province. With the passing away of Mr. Ramsell in 1975, a major contributor to the program was lost. During the winters of 1976 and 1977 the Alberta Wildlife Foundation through Bill Morgan obtained the Federal Grant and donations of wood,

and the Edmonton Nature Centre (that supplied working space), cooperated to have handicapped young men, supervised by Ian Young, produce about 4,000 bluebird boxes per year.

The boxes were picked up at the Nature Centre by anyone interested, and distributed all over Alberta. Trails were started from Medicine Hat to the Peace River Country. Fish and Game clubs were particularily active setting up trails at Lougheed, Rocky Mountain House and Stony Plain.

With this proliferation of bird houses, the return of Mountain Bluebirds was assured. From 125 boxes in 1971, five pair of bluebirds fledged 21 young to 1977, in 1330 boxes containing 185 pair of bluebirds fledged 702 young.

Meanwhile, completely independent of the work in Edmonton, the Calgary people had also started bluebird trails. Between 29 March and 5 April 1973, the Calgary Field Naturalists under the leadership of Harold Pinel constructed and set out 191 bird houses. Their boxes ran from Turner Valley to Priddis, then north and west to Calgary and on to Cochrane. From Cochrane the trail went north to Elton and east to about 11 miles east of Didsbury.

In the following year, 1974, the number set out was doubled to 382. New sections included one from Chain Lakes to Turner Valley, a Water Valley loop and a Sundry Loop. In 1975 the number was expanded to 400 houses with 18 boxes set out east of Didsbury.

These boxes were maintained through 1978 with the help of Carol Robinson for the first three years and John Riddell in the last two. In 1979 the originator and his helper John Riddell were unable to continue. Their work was taken over by members of the Calgary Field Naturalists coordinated by Don Stiles. Results were very encouraging with 30 pair of bluebirds producing 113 fledged young in 1973. In 1978, the best year, 84 pair of bluebirds fledged 410 young.

Young people became seriously involved in the Calgary project when Andrew Stiles made 51 houses the winter of 1976-77. On 31 March that spring, he set out these boxes starting from near the Didsbury Junction, west and north to Highway 27 then along this road east for six miles and finally looping partway back south and west. In 1978 Andrew set out another 50 houses, thirty of these near Didsbury and the other 20 near Priddis. He continued in 1979 with 64 more boxes near Priddis and Didsbury. In his first year, 1977, Andrew attracted one pair of bluebirds with 6 fledged young. In 1979, 42 pair fledged 173 young. Meanwhile, Blake Stillings, a retired person had set out 100 boxes in the Cochrane area as an independent personal project in 1978. In the first year, 1979, 4 pair of bluebirds fledged 16 young.

The third major area of bluebird boxes in Alberta began in Lethbridge in February of 1974. The Lethbridge Naturalist's Society contributed $14.00 to assist Duncan MacKintosh and Steve Shipematsu to build 40 boxes. Members of the Club set boxes out in various sites including many within the city. One box produced four young bluebirds. With the availability of boxes from the Edmonton group, Duncan MacKintosh continued to expand this programme. Sixty boxes were added in 1975 and an additional 50 boxes between 1976 and 1979. By 1979, 7 pair of bluebirds produced 36 fledged young. A sidelight was the discovery of several blackbird nests in the cliffs along the Oldman River which produced young too. During this period Duncan had the assistance of Grant Nelson from 1976, Hazel Ross from 1978 and Gordon Chalmers in 1979.

The Lethbridge group decided to make a major expansion in the fall of 1979.

They pooled their own personal resources and have made 385 more houses to be erected in the spring of 1980.

There are other active groups in Alberta who unfortunately have not reported their results to anyone who could publish them. If you have a trail or know someone who is looking after one, please drop me a line.

For more information on the results for Edmonton for any year and further details refer to the Edmonton Naturalist from 1975 onward. For information on the Calgary group for whom I thank Don Stiles for details, refer to PICA, the Calgary Field Naturalists' bulletin, 1979 for Don's comprehensive summary. The Lethbridge material was sent to me by Duncan MacKintosh from his unpublished notes.

(Editor's note: Reports on the Calgary project by Harold Pinel and co-workers were published annually in the Blue Jay. - M.K.M.)

PROFILES ON ORGANIZATIONS WHOSE ACTIVITIES OVERLAP THOSE OF FAN:

2. EDMONTON CHAPTER - NATIONAL & PROVINCIAL PARKS ASSOCIATION OF CANADA

1968 - 1980

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by Elly de Jongh
13715 - 101 Avenue
Edmonton, Alberta T5N 0J8

The National and Provincial Parks Association of Canada (NPPAC) is a non-profit independent citizens' organization dedicated to the preservation of our natural heritage by promoting the expansion of Canada's great parks system and the development of ethical principles for land use and resource management.

The National organization grew out of a small group of nature lovers back in 1963, who realized that Canadians needed an organized and coherent voice to influence the government's role in the wise management of our park lands.

The NPPAC now has 6 Chapters - in Alberta, B.C., Saskatchewan and Ontario respectively.

The Edmonton Chapter was founded in 1968 and immediately launched into the promotion of a new National Park on the East Arm of Great Slave Lake. Soon after, the Chapter's attention focused on the Swan Hills, and the then Socred Government of Alberta was lobbied to set this area aside as a wilderness park. A few years later this was followed up by a study of this "forgotten wilderness," which was published in 1976 in conjunction with the Alberta Wilderness Association, and with the aid of a White Owl Conservation Grant.

In the intervening years the Edmonton Chapter participated in Parks Canada public hearings on the Master Plans for Banff, Jasper, Kootenay and Yoho National Parks (1971), as well as in E.C.A. hearings on strip mining and historical and archaeological resources in Alberta.

In 1972 the Edmonton Chapter spearheaded a major protest campaign against the proposed "Village Lake Louise," and in the same year presented a 20,000 name petition to the Federal Government demanding a stop to the military exercises in the Suffield Military Reserve, which were destroying the unique habitat of the

Middle Sand Hills. Also during that year, a brief was submitted to Parks Canada proposing a Wilderness Park in the Nahanni River Valley.

Land use and development in the Eastern Slopes of the Rocky Mountains was the Chapter's next concern, and in 1973 an extensive brief was submitted to the E.C.A. hearings together with policy guidelines.

In 1974 The Edmonton Chapter hosted the NPPAC National Conference - a Symposium on Northern and Prairie Parks, with 9 guest speakers from various parts of Canada.

In the same year the method of land transfer from National Parks was seriously questioned at a Chapter-organized public forum on the status of Wood Buffalo National Park, with Joe Dion and former Lieutenant-Governor Ralph Steinhauer as guest speakers.

On the local scene, the Government-proposed Capital City Park was discussed both at a public forum and in a written submission to City Council.

1975 saw the Edmonton Chapter involved in the Alberta Land Use Forum as well as in the promotion of an historic waterway on the Clearwater-Churchill and Sturgeon-Weir river systems.

The following year (1976) was one of continuous Chapter activity in a number of controversial issues, such as the proposed twinning of the Trans-Canada Highway in Banff National Park, expansion of Marmot Basin ski resort in Jasper National Park, and major expansion of Sunshine Village ski resort in Banff National Park. Also, the Chapter took an active part in the Master Planning for Waterton Lakes and Jasper National Parks, and a Chapter representative presented a brief at public hearings in Regina, Saskatchewan, on the establishment of a Grasslands National Park in the Kildeer-Val Marie area.

In this year the Edmonton Chapter participated for the first time in a new program by Parks Canada: the Parks Awareness Program. Its aim was both to raise public awareness of National Parks and to provide summer employment for University students. In the first year of the program 2 students were employed, one of whom produced an audio-visual presentation on National Parks, while the other explored and mapped canoe routes in Prince Albert National Park. In the program's second year (1977) the Edmonton Chapter employed 7 students, of whom 2 did research on the natural and human history of both Nahanni and Kluane National Parks, which they recorded in excellent audi-visual presentations; 2 others taped interviews with descendants of early mountaineering guides in the Rockies; from this they prepared a manuscript for a stage production "The Mountain Show," which was performed by the 3 remaining students.

In 1977 the Edmonton Chapter was also involved along with various naturalist groups in the establishment of a 140-acres Nature Reserve west of Edmonton: the "Clifford E. Lee Nature Preserve," which will be developed for public education.

Throughout its 12 year existence the Edmonton Chapter has been active in many more important areas, from the "effects of forestry operations in Alberta," the "use of pesticides and herbicides," to "increased citizen participation in planning and policy development," etc. etc.

Through the preparation of countless briefs on land use and park related issues, the review of Parks Master Plans and participation in numerous public

hearings, the Association has been able to effectively convey its viewpoint to key decision makers.

But, NPPAC can't go it alone. To maintain present programs and carry out future projects, the Association needs help not only from its members, but from all those concerned about preserving this great national resource: our natural heritage! They can help by joining in NPPAC's demanding but rewarding task, through membership and donations of money and/or personal time and effort.

TEACHER'S CORNER: ADOPT A TREE

---

by Joy Finlay[1]
Outdoor and Environmental Education
Edmonton Public Schools

A FRAMEWORK

Experiencing, discovering and thinking are the key processes involved in this thematic approach to activities about trees. Identifying specific skills and techniques that students need to develop and apply will assist teachers:

1. in the selection and sequencing of activities,
2. setting instructional objectives and evaluation criteria,
3. and in preparation of lead-in or follow-up activities that link tree experiences to ongoing programs and core subject areas.

Beyond skill development, purposes include providing students with opportunities

- to become aware of the world around them,
- to develop insights into the nature of living systems,
- to consider concepts of diversity, adaptation, change and interrelatedness,
- and to develop an aesthetic appreciation basic to assuming environmental responsibility.

Procedures for adopting a tree will vary with the age, ability, size and location of the class, as well as the availability of trees within the school vicinity. Each student, or student group, selects a tree to adopt as their special tree.

A program might begin with short visits of five or ten minutes to make specific observations. Over the season tree visits may become special times of magic and wonder. With repeated visits students become acquainted and enjoy their tree, its neighbours and the mystery of changes observed. A teacher's enthusiasm is contagious too!

ACTIVITIES

A FACT FINDING MISSION. How many facts can you record about your tree? How many ways can you find out?

[1]Editor's Note: Joy was recipient of the latest Loran L. Goulden Memorial Award for outstanding work on natural history in Alberta. A biography of Joy will appear in the September issue.

DISCOVERY FIVE. Find out about your tree by using as many of the five basic senses as you can. How does your tree look? sound? feel? smell? taste?

POETREE. Make a list of five, ten or twenty words about your tree. Then arrange the words in a way that they sound best. Print or write them on a piece of paper made in the shape of a tree. Outline your "poetree" with coloured yarn for accent.

BARK RUBBINGS. Place a piece of paper against the trunk of your tree. Rub over the paper with a soft crayon or pencil until the texture of the bark is copied.

TALL TALES. If your tree could talk, what stories could it tell? Pretend your tree can talk and then tell the story for your tree.

VIEWPOINTS. Using different points of view from different places around your tree, see how many ways there are of seeing your tree. Try close up, distant, upside down, backwards, at ground level, at eye level.

A LOG BOOK. Keep a record or scrapbook about your tree through the seasons. Make notes and pictures about weather; or about the way you think you would feel if you were the tree.

THE YEAR OF THE TREE. Present a very special award to your tree for the good work it is doing.

AUTOBIOGRAPHY OF A TREE. Tell the life story of your tree as if you were the tree.

TWIGGY FACES. Be a detective and find the hidden faces. Look for the scars where the leaves have been attached, especially on poplar trees.

FAMILY TREES. Does your tree have relatives near by? Find trees that are the same and trees that are different.

MEASURE A TREE. How high is your tree? One way to find out is to measure shadows; then calculate:

$$\frac{\text{your height}}{\text{length of your shadow}} \times \frac{X \text{ (unknown height of tree)}}{\text{length of tree's shadow}}$$

Or use a hypsometer of a clinometer.

TREE SIZE. How big around is your tree? How many ways can this be measured?

GROWING. How long did it take your tree to grow? On young evergreens, count the whorls of branches to estimate its age.

BRANCH MANAGERS. How have the branches grown? More on one side, or even all around? How old is a branch? Count the annual growth rings, rings all around the branch, to estimate years and amounts of growth. Were some years greater than others?

LIMBERICKS. Get acquainted with your tree, its shape, the size of leaves, buds, flowers, or seeds; then make up limmericks to "explain" about some of the trees characteristics.

SHAPELY LIMBS. Try sketching the shapes and sizes of the limbs. Note the angle of the limb when it comes from the trunk. How far out do the branches reach? How does it look in the rain? or with snow? How does the shape of the limb help the tree?

GREEN SURVIVAL. Is your tree alive? How can you tell? How do trees survive winter and summer? How do they get food? water? air?

LEAF LITTER. Is your tree evergreen or deciduous? What happens to the leaves (or needles) when they fall? Look close on the ground for fallen leaves and evidence of life.

LEAF COUNT. How many leaves does your tree have? Think of ways to estimate the total number by counting only a sample.

LEARNING TREES. How can a tree be a teacher? What can a tree teach us about living things? About us? About the world?

A PASSPORT FOR A TREE. Take or draw a picture of your adopted tree and make a passport. Include information such as name, address, job, description.

NEIGHBOURS. Your tree is part of a community. Who are its neighbours? Who are the living things? What are the non-living things in your tree's surroundings?

VISITORS. Any clues of who visits your tree? Keep a guest book of visitors to your tree. How do guests come - walk? fly? crawl? Do they come to play? eat? to find shelter? a place to live?

APARTMENTS. Imagine your tree as an apartment with a basement, a ground floor, upper stories, and a penthouse on top. What kinds of tenants, real or imaginative, might live in the different apartments?

MIMICRY. Be your tree - in the wind, on a sunny day, in winter after a snow fall, in spring, at night, on a frosty autumn morning, growing, waiting.

LETTERS TO THE EDITOR

16 February 1980

Dear Dr. McNicholl:

Thank you very much indeed for your interest in the Aldabra appeal of the Seychelles Islands Foundation, and for your kindness in bringing the appeal to the readers of the Alberta Naturalist.

Aldabra Atoll is one of the most remarkable places in the world, and I enclose a brochure which demonstrates this fact. Nowhere else possesses such a unique population of over 150,000 Giant Tortoises, and this alone constitutes a scientific resource of immense value.

For thirteen years Aldabra has been looked after by the Royal Society of London. After 31 March 1980, it will be in the hands of the Seychelles Islands Foundation. This needs a capital sum of not less than $1,000,000 to support the wardenship of this extraordinary place in perpetuity. This can be raised only if all those who understand these things and who know what Aldabra means rally round and help.

If you can support us financially, please do. If you can tell us of any particular persons concerned with conservation in Alberta and who would appreciate what we are doing, please tell us. Already we have a long list of distinguished supporters, headed by Prince Charles the Prince of Wales, but we need many more. Please do what you can.

Yours sincerely,

D.R. Stoddart
Appeal Committee of the
Seychelles Islands Foundation

Editor's Note: Please see Conservation News, this issue, for addresses to which donations may be sent.

Dear Editor:

I take great exception to the advertisement in the March 1980 (vol.10, no.1) issue of the Alberta Naturalist by the Association for the Protection of Fur Bearing Animals (pg.40). As a naturalist, both interested and active in the battle for intelligent management of our earth's resources, I feel that ads such as this - based predominantly on emotion - do not represent, nor express, what a natural history organization should stand for. Having spent a good deal of time this past winter with the Alberta Trapper Education Program, and with a local trapper on his line, I am fully aware that the leg-hold trap is not painless. If set properly and checked regularly, however, it is not extremely cruel. Many people have the naive belief that Nature itself is not ruthless, but anyone who has seen a Coyote suffering from mange, (an affliction that manifests itself when populations become too dense), or a Beaver from tularemia, soon realizes that responsible and effective trapping is by far the best alternative. It is to the irresponsible trapper that our humanitarian concerns should be directed; anyone who traps when population numbers are low, or who sets traps incorrectly and/or fails to check them regularly, or who allows, through carelessness, a pelt to become damaged should, in my estimation, be severely penalized and prevented from further trapping. We simply cannot afford to let emotions override sound population management. Problems such as habitat loss and wildlands destruction are far more pressing and critical, and it is to these issues that we should expend our energies.

Myrna Pearman
RR3,
Rimbey, Alberta TOC 2J0

(Editor's Note: see Editor's page for comments on this letter.- M.K.M.)

RECENT PUBLICATIONS ON THE NATURAL HISTORY OF ALBERTA

---

by David M. Ealey and Martin K. McNicholl

Anderson, M.L. and A.W. Bailey. 1979. Effect of fire on a *Symphoricarpos occidentalis* shrub community in central Alberta. Can. J. Bot. 57:2819-2823.

Anonymous. 1979. Latest rumors. Continental Birdlife 1:28. - includes report of Gray-headed Chickadee in Edmonton, since found to be an aberrant Black-capped Chickadee.

Anonymous. 1979. The art of Fitzharris. Effective nature photography takes time, technique and tenacity. Nature Canada 8(4):4-11.

Anonymous. 1980. October 14th 1979 - outing in the Coronation country. Buffalo Lake Nat. Newsletter 15:1.

Anonymous. 1980. Sunday Dec. 2nd. First "snow hike." Buffalo Lake Nat. Newsletter 15:2.

Anonymous. 1980. Recent bird sightings. Buffalo Lake Nat. Newsletter 15:3.

Anonymous. 1980. Christmas bird count results. Wildlife Reserve of Western Canada count. Bow Valley Nat. Newsletter No. 5:4.

Battrum, M.W. 1980. 1979 flowering dates for 12 common species in the Calgary area. Pica 1:95-97.

Baum, B.R. 1980. Multivariate morphometric relationships between *Hordeum jubatum* and *Hordeum brachyantherum* in Canada and Alaska. Can. J. Bot. 58:604-624.

Bird, C.D. 1979. Paul F. Bruggermann, 1890-1974. Blue Jay 37:225-226.

Boag, D.A. and J.H. Alway. 1980. Effect of social environment within the brood on dominance rank in gallinaceous birds (Tetraonidae and Phasianidae). Can. J. Zool. 58:44-49.

Boag, D.A. and J.A. Bentz. 1980. The relationship between simulated seasonal temperatures and depth distributions in the freshwater pulmonate, *Lymnaea stagnalis*. Can. J. Zool. 58:198-201.

Boag, D.A. and V. Lewin. 1980. Effectiveness of three waterfowl deterrents on natural and polluted ponds. J. Wildl. Manage. 44:145-154.

Boag, D.A., K.H. McCourt, P.W. Herzog and J.H. Alway. 1979. Population regulation in Spruce Grouse: a working hypothesis. Can. J. Zool. 57:2275-2284.

Butler, D., W.B. Lyons, J. Hassinger, and P.A. Mayewski. 1980. Shallow core snow chemistry of Athabasca Glacier, Alberta. Can. J. Earth Sci. 17:278-281.

Calgary/Banff Chapter, National and Provincial Parks Association of Canada. 1980. Resort in court. Nature Canada 9(1):27.

Copland, H.W.R. 1979. Prairie nest records scheme 1979. Man. Mus. Man and Nature, Winnipeg. 5 pp.

Craig, E. 1980. Secretarys' & recording secretarys' bit. Northern Nat. No. 45: 4-5. - including observations in Grande Prairie area.

Craig, E. 1980. Secretary & recording secretary's bit. Northern Nat. No. 47: 2-3. - with natural history notes.

Dekker, D. 1979. Long-tailed Jaeger preys on Lesser Yellowlegs. Blue Jay 37:221-222.

DeVogel, H. 1979. Pileated Woodpeckers nesting on the North Saskatchewan River. Blue Jay 37:225-226.

Dormaar, J.F. 1979. Organic matter characteristics of undisturbed and cultivated chernozemic and solonetzic A horizons. Can. J. Soil Sci. 59:349-356.

Dumanski, J., S. Pawluk, C.G. Vucetich, and J.D. Lindsay. 1980. Pedogenesis and tephrochronology of loess derived soils, Hinton, Alberta. Can. J. Earth Sciences 17:52-59.

Fisher, R.M. and M.T. Myres. 1980. A review of factors influencing extralimital occurrences of Clark's Nutcracker in Canada. Can. Field-Nat. 94:43-51.

Fuller, T.K. and L.B. Keith. 1980. Summer ranges, cover-type use, and denning of Black Bears near Fort McMurray, Alberta. Can. Field-Nat. 94:80-81.

Griffiths, G.C.D. 1980. Studies on boreal Agromyzidae (Diptera). XIV. *Chromatomyia* miners on Monocotyledones. Entomol. Scand. Suppl. 13:1-61.- reference contributed by G.C.D. Griffiths.

Griffiths, G.C.D. and D.E. Griffiths. 1980. Terrestrial ecological studies of the Clifford E. Lee Nature Sanctuary (Alberta) during 1979: vascular plants and birds. Management Comm., C.E. Lee Nature Sanctuary, Devonian Botanical Garden, Winterburn, Alta. iii + 174 pp. - reference contributed by G.C.D. Griffiths.

Halladay, I. 1980. Calgary Christmas bird count. Pica 1:89-90.

Harder, L.D. 1980. Winter use of montane forests by porcupines in southwestern Alberta: preferences, density effects, and temporal changes. Can. J. Zool. 58:13-19.

Holroyd, G. 1980. Christmas bird count results. Banff-Canmore. Bow Valley Nat. Newsletter No. 5:2-3.

Holzinger, J.R. 1980. *Stygobromus canadensis*, a new subterranean amphipod crustacean (Crangonyctidae) from Canada, with remarks on Wisconsin refugia. Can. J. Zool. 58:290-297 - in Castleguard Cave, Alberta Rockies.

Kelsall, J.P. and R. Burton. 1979. Some problems in identification of origins of Lesser Snow Geese by chemical profiles. Can. J. Zool. 57:2292-2302.

Kuster, J.E. and W.G. Evans. 1980. Visual fields of the compound eyes of four species of Cicindelidae (Coleoptera). Can. J. Zool. 58:326-336.

Lohr, L. 1980. Christmas bird count 1979. Buffalo Lake Nat. Newsletter 15:2.

Lohr, L. 1980. Sun. Dec. 23 second bird count. Red Deer River area. Buffalo Lake Nat. Newsletter 15:2.

Lousier, J.D. and D. Parkinson. 1979. Organic matter and chemical element dynamics in an aspen woodland soil. Can. J. For. Res. 9:449-463.

Machin, A. 1980. Carburn park. Pica 1:107.

Maitland, V.R. 1980. Coyote concern. Buffalo Lake Nat. Newsletter 15:4.

McIvor, M. 1980. Twinning the Trans-Canada Highway in Banff National Park. Nature Canada 9(1):26.

McIvor, M. 1980. Christmas bird count results. Bow Summit bird count. Bow Valley Nat. Newsletter No. 5:304.

McGraw, K. 1980. Hibernation of the Richardson's Ground Squirrel. Pica 1:92-94.

McKinney, F. and S. Derrickson. 1979. Aerial scratching, leeches and nasal saddles in Green-winged Teal. Wildfowl 30:151-153.

Podlubny, J. 1980. Wildlife Reserve of Western Canada Christmas bird count, December 29, 1979. Pica 1:90-91.

Raszewski, A.D. 1980. A place apart...The Clifford E. Lee Nature Sanctuary. Nature Canada 9(1):4-9.

Redhead, S.A. 1980. The genus *Strobilurus* (Agaricoles) in Canada with notes on extralimital species. Can. J. Bot. 58:68-83.

Rogers, M. 1980. A review of natural areas in and around Calgary. Pica 1:98-100.

Rogers, T.H. 1979. The autumn migration. August 1 - November 30, 1978. Northern Rocky Mountain - intermountain region. Amer. Birds 33:196-199.

Rolley, R.E. and L.B. Keith. 1980. Moose population dynamics and winter habitat use at Rochester, Alberta, 1965-1979. Can. Field-Nat. 94:9-18.

St.-Onge, D.A. 1980. The Wisconsinan deglaciation of southern Saskatchewan and adjacent areas: Discussion. Can. J. Earth Sci. 17:287-288.

Saunders, J. 1980. Some aspects of Fish Creek Provincial Park. Pica 1:100-101.

Serr, E. 1979. The autumn migration. August 1 - November 30, 1978. Northern Great Plains region. Amer. Birds 33:188-191.

Sherrington, P. 1980. Two records of exotic shorebirds in central Alberta, 1979. Pica 1:86-88.

Smith. H.C. 1979. Long-legged Bat in Alberta. Blue Jay 37:230-235.

Steeves, J. 1980. Bird observations. Pica 1:84-85.

Stiles, D. 1980. Calgary area bluebird trails, 1979. Pica 1:80-83.

Stiles, D. 1980. December 9, 1979: northwest of Cochrane. Pica 1:106-107.

Weseloh, D.V. and L. Cocks. 1979. Recent nesting of the Caspian Tern at Egg Island, Lake Athabasca, Alberta. Blue Jay 37:212-215.

Wilde, G.A. 1979. Possible swallow response to insecticide use. Blue Jay 37:226.

Wildman, H.G. and D. Parkinson. 1979. Microfungal succession on living leaves of *Populus tremuloides*. Can. J. Bot. 57:2800-2811.

Wilson, M.V.H. 1980. Oldest known *Esox* (Pisces: Esocidae), part of a new Paleocene teleost fauna from western Canada. Can. J. Earth Sci. 17:307-312.

FAN AND CNF NEWS

AORC ADDRESS: I have been reminded by Dorothy Broadbent that the address of the AORC (Alberta Ornithological Records Committee) has not been given to members recently. The Chairman is Ian Halladay, 2103 Crocus Rd. N.W., Calgary, Alberta T2L 0Z7. Members are urged to send full documentation of rarities to this committee. The importance of this is exemplified by the "Gray-headed Chickadee" example discussed in "Continental Birds" in the Note & News section. - M.K.M.

REPORT FROM P.A.C. - A joint meeting of the Public Advisory Committees and the Environment Council of Alberta was held on 30 January in Edmonton. A decision was made at that time to authorise the Pollution Study Group to act as an *ad hoc* committee to study the problems of noise in Alberta and to set up guidelines for public hearings on noise pollution in this province.

Two volumes of the ECA publication, "Noise in the Human Environment," have been circulated to members of PAC. Members had studied the first volume and judged it too technical and difficult for public distribution. Most persons present felt that more information is needed on the costs versus the benefits of abatement measures and the kind of trade offs involved.

Noise was defined as the wrong sound in the wrong place. The public appears to be apathetic to the effects and hazards of noise. The meeting expressed concern that before public hearings are held, the ECA should distribute easily understood literature pointing out the hazards and stresses of noise in the environment on humans and animals.

Experiments with noise have revealed that noise stress can produce alcoholic rats and makes people less willing to help other humans in need of assistance. Better known effects of noise are loss or impairment of hearing, increased amount of connective tissue in the heart and an increase in the systolic blood pressure. Although, we know noise is dangerous to health, it is difficult to document its precise effects on people, animals and even plants. It is also difficult to measure its intensity and pitch and even more difficult to formulate acceptable social levels of noise. Hopefully the Pollution Study Group, will suggest some basic recommendations which will assist the ECA in formulating some guidelines for public hearings.- Dorothy Broadbent

TURNER/HALLADAY TROPHY AWARDED TO CFNS - Once again the Calgary Field Naturalists' Society was awarded the Turner/Halladay Trophy for highest number of species reported on an Alberta Christmas Bird Count. Calgary tallied 47 species this year.

Throughout the Province, 319 observers participated in fourteen Christmas Bird Counts. Approximately 36,000 individual birds representing 91 species were reported.

Among unusual sightings or "firsts" for Alberta Christmas Bird Counts were a Ross' Goose in Calgary, Wild Turkeys at the Porcupine Hills, a dead Black-legged Kittiwake at Lake Wabamun, a Screech Owl from Lethbridge, Chestnut-backed Chickadees at Waterton Lakes National Park, and American Goldfinches at both Edmonton and Lethbridge.

Details from this year's Christmas Bird Counts can be found in the May supplement of the Alberta Naturalist.

- Virginia Lang Young

F.A.N. FALL MEETING - CALGARY, 20 & 21 SEPTEMBER 1980 - Registration, Executive meeting, Evening meeting and Art Exhibition will be held at Mount Royal College.

Field Trips in the Calgary area, including Fish Creek Provincial Park and Interpretive Centre, will leave from the College. There is plenty of parking.

Supper. Names will be taken at registration. Cost - not more than $5.00.

Panel discussion - 7:30 p.m. Sat. 20th. September with representatives of Alberta Wilderness Association, National & Provincial Parks Association of Canada, Alberta Fish & Game Association and F.A.N. Chairman - Dr. Gordon Hodgson, Director, Kananaskis Centre for Environmental Research.

Accommodation - In members' homes - contact Jean Gill, 2816 - 32nd St. S.W., Calgary, Alberta T3E 2S2. Phone 249-3963, if you require or can offer accommodation. Motels - we suggest you use those on MacLeod Trail as they are nearest to the College. There is no camping in Calgary; the nearest site is on No.1 highway just west of the city limits.

Art Exhibition - we are already getting a good response. See notice in this issue of A.N. if you wish to enter work.

Further details will be sent to members nearer the time but
BOOK THE DATE NOW FOR OUR 10TH ANNIVERSARY.

" THE ART OF NATURE"

an

ALBERTA NATURE ART EXHIBITION

sponsored by

THE FEDERATION OF ALBERTA NATURALISTS

at

MOUNT ROYAL COLLEGE GALLERY, CALGARY

SEPTEMBER 1980

All Alberta nature artists, whatever their medium (including pottery, porcelain, photography, sculpture, carving, weaving etc.) are invited to submit up to two examples of their art. The Exhibition will open on 20th September, 1980 for three weeks. Exhibits will be selected by jury. There will be a Junior Division for artists 15 years old and under.

Artists wishing to submit work must obtain an application form from

The Federation of Alberta Naturalists
c/o Mrs. D. Dickson
231 Scarboro Ave. S.W.
Calgary, Alberta
T3C 2H4

Application forms must be returned by 31st July.

For additional information, please contact Dorothy Dickson at the above address or phone Calgary 244-0191.

DEADLINES FOR PROJECT REPORTS

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1. Alberta Flowering Dates - 31 October 1980
   Return to: Dr. Charles D. Bird
   Box 165
   Mirror, Alberta TOB 3CO

2. Alberta Christmas Bird Counts - 15 January 1981
   Mail to: Virginia Lang Young
   R.R. #1
   Busby, Alberta TOG OHO
   - where full count is to be published elsehwere, indicate reference as it should be cited.

*3. Species Count Day (May) - Birds and Mammals - 15 July 1980
   Mail to: Allen N. Wiseley
   509 - 321 - 10 St. N.W.
   Calgary, Alberta T2N 1V7

*4. Species Count Day (May) - Plants - 15 July 1980
Mail to: J. Derek Johnson
Northern Forest Research Centre
5320 - 122 Street
Edmonton, Alberta T6H 3S5

5. Prairie Nest Records Scheme - 1 October 1980
Return to: Herbert W.R. Copland
Manitoba Museum of Man & Nature
190 Rupert Avenue
Winnipeg, Manitoba R3B ON2

* These deadlines should occur just before of after readers receive this issue. Please send your reports to these compilers promptly!

PRESIDENT'S PAGE

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by Mary S. Lore
1621 - 4th St. N.W.
Calgary, Alberta

Today spring is in the air and that means that soon we will be seeing the birds as they rise above the ground, as well as all the other interesting little bits of beauty and life that accompany the spring season. May each one of you take time to enjoy each season in its turn as we go about our daily routine.

The Environmental Co-ordinator, Dianne Pachal with the Alberta Wilderness Association (A.W.A.), is busy - a letter to the minister supporting hunter training for those in need of such training as a result of a problem, and hopefully eventually to all who must hunt - we think of attitude, care, concern and courtesy of the species involved and the land and the land owner.

Andy Russell has approached A.W.A. to start the basic plans for an initial meeting of all of our conservation and environmentally concerned groups to meet in June/80 in the hopes of forming a type of federation where we can use our common interests and concerns more effectively.

The St. Paul area teachers have heard about Environmental Education and suggested bursaries from F.A.N. I have phoned a few about this and have said that we will provide three one hundred dollar bursaries to teachers who are teaching environmental education in the classroom, so that they become better informed and can deal effectively with the students in this most important area. I hope I have your support.

The fourth annual Environmental Education project was to students regarding, "Does Alberta need an Alberta Mammal as a mammal emblem? If so, which one would you choose and why - if no, say why." The response has been overwhelming! The adult members of F.A.N. in some cases were not interested, but it seems the children are.

Maryhelen Posey will attend the Problem Wildlife conference in Edmonton, 18 April. Maxine O'Riordan might attend the Federal and Prov. Wildlife conference in Ottawa 24-27 June.

Membership secretary Myrna Pearman has prepared a letter to send out to delinquent members relative to their fees to remind them how important it is to

support F.A.N.

Myrna and Dave have prepared a letter for us to mail to as many school librarians as possible encouraging them to subscribe to our fine publication in the interests of environmental education in the schools. Copies will be sent when the "Mammal Emblem Essays" are returned, and also along with some membership brochures.

The response to increase in membership fees was positive and a new brochure is being printed and will be mailed to all clubs and directors - membership is now $6.00 annually, $1.00 to Bucks for Wildlife and a portion to support our Environmental Co-ordinator.

If I interpreted the Canadian Nature Federation minutes correctly, a request from Cam and Joy Finlay for assistance with an environmental education project was not supported. We need more information on such projects and why they are not supported by groups like us. What is more important than doing our best to educate for the future as meaningful as possible and as widely and quickly as possible?

The University of Calgary facilities have been reserved for 1982 for the Canadian Nature Federation conference, 2-6 July, with the meeting dates for the sessions being Monday and Tuesday 5 & 6 July. We need a theme and top program speakers. We will want to share our area of natural treasures in the form of field trips. Volunteers are needed.

Jill Seaton, Spokesperson for Coyote Concern, who works with 7 others, says plans are underway to have the Coyote's status moved from Agricultural nuisance to Fish and Game wildlife as a game animal. She also states that one of the serendipities of Coyote Concern has been talking to school children in the surrounding classrooms about the Life of the Coyote. One of her choice thank you letters from a student - "thanked her for coming to visit the class and telling them about the Coyote and for wasting her time with them!"

We need members - this never seems to work and it really should. Everyone get a new member. Have you embarrassed your relatives and best friends into joining F.A.N.? Try it; they will like it!

All the best and keep me informed of your activities and problems wherever you are.

EDITOR'S PAGE

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by Martin K. McNicholl
128 Silvergrove Hill N.W.
Calgary, Alberta T3B 4Z5

A recent move to the above address allows contributors to write directly to me now if they wish. I did not use a home address earlier as mail was sometimes stolen there. Readers using the FAN box number should be aware that mail forwarded from there takes anywhere from 2 days to a month or more to reach me after it has been forwarded from the box. For example, I recently received a note as to whom a photograph should be cited, but have not yet received the article containing the photograph! As mail frequently takes over 2 weeks (according to the postmark) to reach me even on initial mailing, two mailings can delay it considerably.

Myrna Pearman has raised an important issue in a letter to the editor

published in this issue. I have frequently stressed the important distinction between a naturalist group, such as FAN, and a conservation group, such as N.P.P.A.C., Sierra Club, Greenpeace, etc. Naturalists should respond to conservation issues from the point of view of naturalists, i.e. according to fundamental ecological principles, rather than through emotional feelings. This is not to say that conservation groups never base their stands on facts. Some, such as N.P.P.A.C., do a tremendous amount of research on issues, and in fact are dominated by naturalists. But many conservationists are not naturalists, and our credibility will be maintained only if we always respond to conservation issues on the basis of our experience as expert amateur and professional people who study nature. Thus, we should respond to hunting, trapping and related issues according to the impacts of these activities on the resource. If the populations hunted are declining we must oppose the hunt or call for a revision in the regulations, but if the populations are maintaining themselves we should not take an official stand against the hunt, unless it violates some other ecological principle or threatens some important area for another species. Of course as individuals we may object on emotional grounds, but such objections should be made at an individual level or through a protest-style organization. Thus, I agree with Myrna that FAN should not officially support the Association for the Protection of Fur-Bearing Animals. We would, however, work with them on some issues.

On the other hand, I do not agree with Myrna that we should refuse advertising from this organization. Their aims at least overlap ours, and do not run contrary to our aims, as far as I know. We agree with them that trapping should not be conducted in such a way that the population of any species will decline. Some believe that this should be accomplished by no trapping at all; others that it should be accomplished through careful management. Both are legitimate views which will be held by naturalists, and thus we should neither take an official stand on either side nor refuse the expression of opinion from either. We will not publish any advertisements that run contrary to the principles for which we stand, but will publish advertising from groups whose interests overlap ours. Finally, I must remind all concerned that publishing of any advertisement or article does not constitute support from either FAN or the editor of the views expressed.

CLUB NEWS

Buffalo Lake Naturalists - At the Annual Meeting on 17 Jan. 1980, Lloyd Lohr was re-elected President and Bertha Clarke Secretary. Wilf Hewlett was elected Vice-President and Marvin Lohr Treasurer. Other officers are: J. Burrell, librarian; J. Burrell, Eric Smith directors, with Elsie Doak as a substitute. Virginia Maitland remains editor of the newsletter. A number of meetings and outings were held in fall 1979 and early winter 1980, including an outing to the Coronation area, a "snow hike" at Lloyd Greenlee's farm near Botha, Christmas bird counts at Stettler and near Erskine, and ski outings at Oberlin and at the Kruger farm. Phillip Currie, Curator of Paleontology at the Provincial Museum was to talk on 17 April at a regular meeting, with the local rock club as guest of BLN. - M.K.M., based on BLN Newsletter 15, 15 February 1980.

Calgary Field Naturalists' Society - By the time this is in print, club activities for the 1979-80 season will be over. Looking back on our programme - all speakers were good, some excellent, and field trips were enjoyable. Attendance was often disappointing and our financial situation is not very good. The executive is

looking at ways to cut costs and drawing up a strict budget for next year.

The last two Audubon films were well attended thanks to help with publicity given by other local conservation organizations, especially the Zoological Society. We have, therefore, decided to book another series of films for next winter.

Although we were able to cut costs on the second issue of Pica, it has become obvious that our budget cannot support such a magazine as a quarterly publication. Unless we can obtain funding from other sources the next issue will probably not appear until January '81.

Plans for the F.A.N. Fall Meeting and Art Exhibition in Calgary are going ahead. I would appreciate more Calgary F.A.N. members volunteering to help - please phone me at 244-0191.

- Dorothy Dickson

Lethbridge Naturalists' Society - The Lethbridge Galt Museum for the third year sponsored a Nature Art Show in February. The response of 103 entries was considered excellent. It was a juried show with 58 paintings, dried arrangements and ceramic pieces being hung. Entries to these shows can be of any medium but must interpret the natural history of southern Alberta and the artist must be living in the area. The jury is concerned with two areas: 1. the artistic and natural merit and 2. how the work relates to the whole show. As far as is known, this annual Nature Art Show is the only one in Alberta devoted entirely to interpreting nature, according to the Galt Museum curator, Jack Elliot.

Our first Mountain Bluebird for this year was reported 21 March in 6-mile Coulee. Since then various reports have been received of sightings on the prairie and in the mountains. Duncan Mackintosh, our local coordinator, reports an active winter building and placing nearly 600 houses in southern Alberta. Each house is numbered and hopefully there will be a report for each one this fall, whether it has housed a bluebird, another species of bird or left empty. Duncan hopes to band each fledgling hatched in 1980.

Most of our summer outings will be over by the time this newsletter is published but they included 3 birding outings and two other day outings. On 10 August we will be going to Waterton High Country and 13 September there will be an interesting trip to the confluence of the Old Man and Bow rivers.

- Hazel Ross

Red Deer River Naturalists - A banquet was held at the November 1979 meeting of the Red Deer River Naturalists. This was a revival of an old custom which started at the beginning of the 1900's in the early days of the club. Guest speaker was George Kinear, leader of Canada's 1982 Everest Expedition.

Fred Schutz and Maxine O'Riordan entertained their fellow members at the January meeting. They showed slides of a recent trip to Africa. Another member, Barry Parrington will provide the February program. He will show slides of a 42 day, 650 mile canoe trip down the Kazan River in the Keewatin district of the N.W.T. The March meeting will feature a talk by Albert Lees, a Wildlife Habitat Biologist coordinating a pilot habitat project in the Red Deer County. He will outline ways in which the RDRN may be of assistance, such as determining population numbers of non-game species. Several club members will meet with Jerry Kemp of the Dept. of Fish and Wildlife in early March. They will point out some of FANs concerns regarding proposed changes in the hunting regulations.

- Dorothy Broadbent

NOTES AND NEWS

Continental Birdlife - Another new bird journal has hit the market! Continental Birdlife contains distributional notes, identification papers, book reviews, etc. on North American birds (not Europe, outside of the British Isles, as might be implied to many readers by the title). The first issue is produced well, with several interesting papers, including a detailed discussion on distinguishing races, hybrids and introgressant flickers and a note on identifying sex of Starlings. An unfortunate feature is "Latest rumors," referring to possible occurrences of out-of-range birds, not yet confirmed. In this issue, the alleged Gray-headed Chickadee of Edmonton is listed. The bird was later found to be an aberrant Black-capped, a fact known only after many people had come long distances to see the bird! Thus, I question the wisdom of including unverified reports of this nature. They should properly be verified first, and preferably discussed by a group such as the AORC. Continental Birdlife may be ordered from Post Office Box 43294, Tucson, Arizona 85733, U.S.A. for $10.50 Canadian annually. - M.K.M.

Field Trips - The February 1980 Newsletter of the Edmonton Chapter, National & Provincial Parks Association of Canada (Vol. 12, No. 2:3) lists the following field trips and contacts (Edmonton phone numbers):

6-9 June - canoe Red Deer River through Dinosaur Prov. Park
- Ian Robertson, 452-6901 (office); 452-2178 (evenings).

23 June - hike in sandhills of Redwater area
- Julie Hrapko, 455-8756 (evenings); 427-1734 (day).

16-19 May - Milk River Canyon area (including Writing-on-Stone Prov. Park)
- Ross Hodgetts, 487-1104; Peter Davidson, 479-2617.

The Alberta Naturalist would be pleased to consider accounts of these outings for publication. - M.K.M.

Naturalists' Guide to Alberta - "This guide is now at Hurtigs for printing. Both Lloyd Lohr and Charles Bird have submitted editorial comments. Formal letter will go to Alberta Provincial Museum from Mike McIvor (Past President) stating that FAN still supports project and is pleased with its progress." - Minutes, 30th regular meeting, FAN board of directors, 26 January 1980.

Editor Edits More - Effective at the end of 1979 Susan Kaiser has resigned as Recent Review Editor of North American Bird Bander, to be replaced in 1980 by yours truly. Alberta banders who come across relatively obscure papers involving banding are invited to bring my attention to them, so that an abstract may be prepared. - M.K.M.

Parks Conference Proceedings - The proceedings of "The Canadian National Parks: Today and Tomorrow Conference II," held in October 1978 at Banff are available as a two volume set (838 pp.). Send a cheque or money order payable to Dr. J.G. Nelson for $18.00 plus $5.00 (first class mail) or $3.00 (parcel post) to: J.G. Nelson, Dean, Faculty of Environmental Studies, University of Waterloo, Waterloo, Ontario N2L 3G1. - from Feb. 1980 issue of Calgary/Banff Chapter National & Provincial Parks Association of Canada.

B.C. Holiday - Arnica Adventures, R.R. No. 1, Nelson, B.C. V1L 5P4 offers a variety of hiking, camping, canoeing and mountain climbing holidays under guidance in the Selkirk, Valhalla and Purcell Mountains, B.C. A brochure describing their programs from 1 May to 15 October 1980 can be obtained from tour director, John Carter at the above address or by phoning 604-825-9351.- based on Arnica Adventures brochure.

Weselohs Return to Lead Field Trip - Canadian Nature Tours, run jointly by the Canadian Nature Federation and the Federation of Ontario Naturalists, include a "Grasslands and Badlands" trip on their agenda. The trip will take place 13-20 July, 1980 in a circle bounded by Calgary, the Milk River, Brooks and Drumheller, and will be led by Chip and Linda "Wesloe" (a misspelling of Weseloh). Chip and Linda are now residents of Toronto, Chip working for the Canadian Wildlife Service in Burlington, but were prominent Alberta naturalists. Chip did his Ph.D. under Tim Myres at University of Calgary, then worked as Curator of Ornithology at the Provincial Museum of Alberta in Edmonton. He was editor of both the Calgary Field Naturalist and the Edmonton Naturalist, and also Secretary of the Alberta Ornithological Records Committee.- M.K.M., based partly on an insert in Nature Canada 9(1), 1980.

Hohn Receives Award - The March 1980 issue of the Edmonton Bird Club's newsletter announces that the annual Bird Club Award for Contributions to Local Ornithology was presented to Dr. E. Otto Hohn, one of the founders of the club. Dr. Hohn is a physiologist at the University of Alberta, and is well known in ornithological circles for his work on the physiology of birds as well as for distributional and life-history studies. His many publications include a chapter in A.J. Marshall's 2 volume work on the physiology and behaviour of birds, a monograph on the Red Phalarope, and numerous papers in Auk, Blue Jay, Canadian Field-Naturalist and other journals. He is also the author of the history of the Edmonton Bird Club in the forthcoming special supplement of the Alberta Naturalist on the history of FAN and its corporate member clubs. Clearly, Otto is a most deserving recipient! - M.K.M.

Karvonen Film Places at International Festival - Alberta naturalists will be pleased to learn that Albert Karvonen's film, "Osprey's Domain," received an Honorable Mention at the Third Annual International Wildlife Film Festival held 29 February to 2 March 1980 at the University of Montana, Missoula, Montana. The film competed with such long-time winners as the National Geographic Society and BBC, so placing at all is a major achievement. Another Canadian film, "The Blue Grouse: Questions in Population Biology," by Robert J. Long of Saskatchewan won the Merit Award for Presentation of Scientific Research. Long is a former M.Sc. student of Dr. David A. Boag of the University of Alberta, and much of the film features the Vancouver Island studies of Dr. James F. Bendell of the University of Toronto and Dr. Fred C. Zwickel of the University of Alberta. - M.K.M.

George Ball Honoured - Dr. George E. Ball, Chairman and Professor of Entomology at the University of Alberta, was among employees of the university presented with an engraved plaque for 25 years of service to the university at a ceremony on 14 January 1980. Dr. Ball is an active member of the Edmonton Bird Club.- based on an article in Folio/New Trail 16(35):10, 1980.

News from Ministik Hills - The June weekend is to take place on the 20th-22nd, the time of the summer solstice, and will be involved in events of the sun and moon as well as a study of earthly phenomena, such as can be seen in rocks and soil and water. Called 'Our Earth Environment,' it is to be led by Dr. John Marean of the University of Calgary. Cost $40. Information and enrollment is through the Faculty of Extension, University of Alberta, or from Lois Fenna, RR2, Tofield, Alberta T0B 4J0.

An organisational change is in the wind at the Centre, which is in the process of being converted to a non-profit-making Society. This is not expected to affect the running of the programs, but in the course of time we hope that it may help to increase the range and depth of activities offered.- Lois Fenna

John Janzen Nature Centre Spring Program - Although the John Janzen 1980 spring program was sent to us too late for readers to enroll, the courses are summarized here so that readers will be familiar with the courses offered. Spring titles (14 April through 20 July) were: Pelicans to Plovers: Spring Birding; Game Fish Habits and Homes; Wildlife Wood Carving; Pops and Tots Nature Exploration; Anorak -making: Original Outdoor Clothing; Basic Survival Skills; Nature Photography; Willow Basketry; Drawing in the Out of Doors; Dyes from Nature; Flickers to Flycatchers: Summer Birding; Foraging for Dinner - The Edible Wild; and Gold -Panning. This program seems to offer something for everyone, but if you would rather help instruct than take courses, the centre always needs volunteers. At any rate, a visit is well worth while, and there is a small book store. The Centre is located in Fort Edmonton Park near the Quesnell Bridge in Edmonton. Information on future programs can be obtained from: The John Janzen Nature Centre, Edmonton Parks and Recreation, 10th floor, CN Tower, Edmonton, Alberta T5J OK1.- based on the Centre's brochure for spring 1980.

CONSERVATION NEWS

Toe-clipping of Rodents - A common method of marking mice, ground squirrels and other rodents for individual identification by researchers is to cut off toes in various patterns. In this way not only can the researcher identify a trapped animal, but he/she can also identify animals which have left footprints on the study area. Recently this technique has come under attack for its cruelty, especially when used as part of educational research in ecology courses. Thus, readers will be interested in a note in the Jan. 1980 issue of the Bull. Can. Soc. Zool. (Vol. 11, No.1, p.19) to the effect that the Canadian Council of Animal Care has decided that such practices will no longer be condoned for teaching purposes. - M.K.M.

Aldabra - A letter to the Editor on the importance of Aldabra is included in this issue of the Alberta Naturalist. According to an accompanying news sheet, the Seychelles Islands Foundation needs approximately 6 000 000 Sechelles rupees (about $1 000 000 U.S.) as a capital sum, the interest on which should pay annual salaries to a warden and other personnel, maintenance costs, etc. Large donations have been made or promised by the Royal Society, Smithsonian Institute and the French Office de la Recherche Scientifique et Technique Outre-Mer. The following information is also provided:

How to make your donation:

A form for payment by check is attached.

Donations can be made payable to any of the organisations associated with the appeal, at the addresses given below. United States citizens are entitled to tax deductions only on gifts to a non-profit organisation in the United States.

Office of Biological Conservation
MNH Building
Smithsonian Institution
The Mall
WASHINGTON, D.C. 20560
U.S.A.
(Please specify on the check that it is 'for conservation and science in the Seychelles')

The Seychelles Islands Foundation
c/o Barclays Bank International Limited
P.O. Box 167
MAHE,
Republic of Seychelles

World Wildlife Fund (UK)
29 Greville Street
LONDON EC1N 8AY
England

Ambassade des Seychelles
60 Avenue Paul Doumer
75016 PARIS
France
(Please specify on the check that it is for the 'Seychelles Islands Foundation')

Society for the Promotion of Nature Conservation
The Green, Nettleham
LINCOLN LN2 2NR
England
(Please specify account number 00716855)

Bow Valley Naturalists stand on Aqua Centre - Newsletter #5 of the Bow Valley Naturalists (February 1980) lists the following points as being contained in a brief to Parks Canada on the Aqua Centre and Interpretive Centre proposals: (p.5)

1. BVN strongly supports Parks Canada's plans to locate a major Interpretive Centre at the Cave and Basin location.
2. BVN feels that bathing should not be reintroduced at the Cave and Basin on the the scale suggested, if at all. Landscape change and increased hot water and chemical effluent flows in this area will create too great an impact on these important wetlands.
3. BVN recommends that the Upper Hot Springs be maintained as a bathing facility.
4. BVN has consistently opposed facilities which become attractions in themselves. We feel that an Aqua Centre would become just such an attraction and therefore, belongs outside the Park. We have no objection to a community owned and operated pool in an environmentally acceptable area on the north side of the river.
5. BVN has continually urged Parks Canada to introduce a system of public transportation in the Park. We feel that the Cave and Basin Interpretive Centre and the Upper Hot Springs present ideal situations for a trial system.

Earth Day '80 - One of U.S. President Jimmy Carter's New Year proclamations was to designate 22 April 1980 as Earth Day, a special day in which environmental protection was to be emphasized. This is the 10th anniversary of the first Earth Day, held in 1970. A variety of nature-orientated outings, litter campaigns, educational efforts, and other activities were suggested by a special temporary non-profit organization set up to promote active involvement in the day.- M.K.M. based on an information sheet sent by Mary Lore.

New List of Endangered Canadian Wildlife - In an effort to co-ordinate efforts of government departments and conservation groups listing endangered wildlife in Canada, a committee composed of members of federal and provincial governments plus conservation groups was formed in 1977. The Committee on the Status of Endangered Wildlife in Canada published their first list of 23 officially rare, endangered and threatened wildlife species in 1979, according to an anonymous note in Nature Canada 8(4):43, 1979. I have sent for this list and will provide more detail after I obtain a copy.- M.K.M.

Dinosaur Provincial Park - In a recent issue of Conservation Canada (Winter 1980), there is an announcement that Dinosaur Provincial Park has been added to the World Heritage List (as published in an earlier issue of the Alberta Naturalist). This site was one of two Canadian parks selected by the World Heritage Committee in Cairo, Egypt during October 1979, the other being Kluane National Park, Yukon. Dinosaur Park is the first site under provincial or state jurisdiction (rather than federal) to attain the status of a World Heritage Site. - D.M.E.

Elk Hunting Near Waterton - According to the April 1980 newsletter of the Calgary/ Banff Chapter, National and Provincial Parks Association of Canada, new regulations

are planned by the provincial government in order to stop hunters from lining up outside Waterton National Park to kill Elk as they wander out of the park. Measures recommended include splitting the hunting season and restricting the number of hunters in these areas.- M.K.M.

Ptolemy Basin - According to Environmental Views 3(1):32, 1980, the Alberta government has turned down a request by Summit Lime Works for permits to open a limestone quarry in Ptolemy Basin, in the Crowsnest Pass area.- M.K.M.

Waterton Now a Biosphere Reserve - According to the April 1980 issue of the Newsletter of the Calgary/Banff Chapter of the National and Provincial Parks Association of Canada, Waterton National Park has been designated formally as a biosphere reserve by the Bureau of the International Co-ordinating Council for UNESCO Program on Man and the Biosphere. This status is a recognition of the biological importance of Waterton, but does not call for any change in present management or use of the park,- M.K.M.

Transmission Line Not To Go Through Reserve - The Edmonton Bird Club Newsletter for April 1980 announces that the Energy Resources Conservation Board has decided that Calgary Power's proposed transmission line from Keephills to Ellerslie will not go through the Clifford E. Lee Reserve.- M.K.M.

JUNIOR NATURALISTS' SECTION

BISON

by Bobbi Turko

(Gr. 6)

When the first white man reached North America, millions of Bison ranged from Great Slave Lake to New Mexico. Slowly they have been killed off until today they can be found only in parks like Wood Buffalo National Park, Elk Island National Park, etc.

The body colour of the Bison is dark brown, becoming almost black on the head and shoulders. Thick, shaggy hair covers the high humped shoulders, neck, fore-legs, and massive head; a long black beard hangs from the chin. Short, thick horns, appearing on both sexes, curve outward and upward from the sides of the head. The average weight of bulls is 1800 to 2200 pounds; cows are smaller and range from 800 to 1200 pounds.

The buffalo is a grazing animal, and feeds almost entirely on grass. The breeding season runs from July until September, and calving occurs from April until June. Usually a single calf is born in April, May or June. Twin calves are rare. Newborn calves are tawny in colour with a dark reddish band down the back. Grass-lands and open woodlands comprise the habitat of buffalo.

Bison may be seen in many wildlife parks. They can be found anywhere along park roads. Tracks, droppings and dust wallows where buffalo roll in the dirt are almost constantly in view and deeply worn trails lace the forests on either side of the park roads. In North America, Buffalo Parks are perhaps the closest approach to an African-style game park. They can be found in Wood Buffalo, Waterton Lakes, Banff and Elk Island National Parks.

I think that we should preserve as much of our wildlife as we possibly can.

I think that we can survive as a country without killing our animals, but if we cannot survive we should only kill as much as we need; not all of them.

There used to be millions of Bison and now there are very few. People are not thinking how important our wildlife are because some people do not care; but I do. I think that the Bison and every other animal has a right to lead a long life, as we do; long enough to know what the world is all about.

ROCKY MOUNTAIN BIGHORN SHEEP

Ulla Arvanetes

(Gr. 7)
Banff Jr. High

INTRODUCTION:

The Rocky Mountain Bighorn Sheep were once common throughout most mountain regions of Western North America and occured along the river breaks and badlands of some prairie regions. But unable to compete with domestic livestock for food, susceptible to their diseases and over hunted, Bighorns were soon eliminated from all but the most rugged and remote portions of their range.

CHARACTERISTICS:

The adult Bighorn ram is a stocky, powerfully-built animal; a mature individual in prime condition may weight up to 160 kilograms. The massive curling horns give the species their name and are true horns, not antlers. They are retained through life. The horns grow year round except for a brief period in winter. Recent studies suggest that growth pattern may be related to the length of daylight. When the horns start growing again, a distinct ring or year mark is left, making it possible to tell the age of the animal by counting them. The average life span is about 13 years. The horns may exceed 115 centimeters in length and have a circumference of over 40 centimeters at the base. The horn tips are often broken or "broomed" in battles between rams during mating season.

The Bighorn ewe is smaller and finer-boned than the ram. Her horns remain small, slightly curved, and goat-like throughout her life; for this reason ewes and lambs are sometimes mistaken for Rocky Mountain goats. The Rocky Mountain Goat, though, is white with black horns. Bighorn Sheep do not have wool, as domestic sheep do, but a coat of coarse hair.

A Bighorn's preferred food is sedges, grasses, small plants, and weeds with new aspen and spruce buds being taken in, in spring, when Bighorns will also dig up leguminous (plants that bear pods) roots. In autumn and winter they eat herbs, fungi, berries, and the tender twigs of bushes.

They feed most during the day, especially in winter. In summer they will lie up during the heat of the day finding resting places that give full view of its surroundings.

LIFE HISTORY

WINTER HABITS:

In late fall the snow drives most Bighorn Sheep from high alpine ranges to bare south-facing slopes at lower elevations, where they spend the winter. When on

the winter range, or in a weakened condition from lack of food, disease or old age, some sheep fall prey to Wolves, Coyotes, Cougers and eagles. These and other natural hazards, such as avalanches contribute to approximately 10 percent of the natural mortality rate of this species.

MATING AND THE JOUSTING RAM:

During the summer the Bighorns separate into different flocks of up to 75; more usually there are only 12 members. The groups of ewes with young are larger than the ram groups. From October onward throughout winter, mating takes place, and there is vigorous rivalry between the rams.

Rams begin breeding when they are 4 years old. Their necks become thicker and they lose much of their fear of man. During November and early December, jousting takes place, not only between rams but between ewes. If they meet and start to fight they use their forelegs, kicking and pawing at each other before they collide. The two Bighorns turn away from each other, retreat some paces into the distance, turn around and charge. The last few yards may be covered on hind legs alone. Just before the collision heads are lowered and the full force of two 800-900 pound bodies is taken on the forehead. The impact is terrific. The Bighorns may be dazed, standing nose to nose for half a minute. Then carefully backing away, they repeat the process. These combats may go on for hours with no decisive results. When the Bighorns tire they walk away. Sometimes there are "battles-royal" free-for-all fights with a dozen or so rams taking part. These may go on all day.

These conflicts seem pointless, especially "battles royal," because if fighting is competition between males, it's strange that the females should also batter each other. The fights between males cannot be related to mating because they do not form harems. There is no competition for females, who mate with any male. The fighting may occur from the excitement that builds up during the mating season.

The peak of mating behaviour is late November. Rams move from one flock to another, singling out ewes and chasing them. If a ewe is receptive it will run only a few yards before stopping and letting the ram do his thing. Otherwise a headlong chase takes place with the ewe being chased around hills by up to a dozen rams. When a ewe is receptive she may mate with several rams in a day.

Ewes become mature at 2½ years. They bear their first lamb when 3 years old after a gestation period of 6½ months. Just before the lamb is due, in May, ewes retreat to the remotest parts of the mountains. The new born lambs follow their mothers all the time. When the lambs are strong enough they are led down to grassy slopes where the ewes gather in flocks of 60 or more.

JOUSTING RAMS DO NOT USE HORNS:

Many people think rams use their horns in fighting. This is not true because the horns are built out of the way of any impact. They may act as a badge of rank. If two rams meet they tilt their heads to see whose horns are larger. The ram with the smaller horns retreats. Fighting would break out only if rams with equal horns met. This may not be the only explanation. In "battles-royal," it's a free-for-all, no matter what size of horns.

Whenever assuming any theory of horns as signs of dominance, remember that the hornless freaks or "hummels" sometimes found among Bighorns seem to be consistently successful at mating and in battle with other males.

BIGHORNS IN BANFF NATIONAL PARK:

In the park, Bighorn Sheep and Elk compete for food on the same range. They may be found wintering together. This can present serious food shortages for both species. The major winter range of the Bighorn is the south-facing slopes above Vermillion Lakes cut by the Trans-Canada Highway.

There are about 1000 Bighorns in Banff. This number has remained stable for many years and likely represents the maximum number the available winter range can support.

Bighorns are found primarily in the high country and are not timid animals. They are often seen along the Trans-Canada Highway and near Lake Minnewanka and Stewart Canyon. They may seem tame but can be wild and unpredictable. For safety and health of visitors and wildlife, it is illegal to feed any wild animal in the park.

PERSONAL EXPERIENCE

I live in Banff National Park, which is somewhat like living in a sanctuary for animals. I guess that's what Banff really is because all the animals here are protected by law against any poachers or trophy seekers. But still there are the tourists who come to see animals wild and free. The problem is they leave garbage everywhere, jammed in crevices of rock faces, strung up on trees and scattered all over the ground.

All the animals had to bear with this, but the Bighorns were exploited. If ever taking a trip up the Sulphur Mt. gondola you are bound to see a flock of Bighorns gathered around a bunch of tourists who are holding some chocolate peanuts out to them. The Bighorns, not knowing how sick it could make them, eat it down. Everyone snaps pictures, hands out more garbage, and has a good time. Last summer many Bighorn were taken ill because they were being fed a diet of Coffee Crisp and O'Henry instead of the vegetation they should eat. Some died. The Park Wardens are now not allowing anyone to feed the Bighorns on Norquay or Sulphur Mt. gondolas.

OVERHEARD

"Our greatest problem is human indifference to the question of infinite use and infinite freedom of use. Just because the parks are out-of-doors does not mean that the use potential is limitless. Part of our legal definition of freedom is that your right to act extends to the point where you hit the other man's nose, and there it ends abruptly. Thus, the right to use these areas exists as long as that does no damage, and that use must be limited before damage occurs."

- The above was taken from a book on writings and pictures about Yellowstone Park, "Slivers of Glass," by William A. Pedersen of Missoula, Montana, U.S.A.

- submitted by Murray A. Tozer

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